INDIVIDUAL ABILITY TO PAY MODEL
USER'S MANUAL

Multimedia Enforcement Division
Office of Regulatory Enforcement
Policy and Program Evaluation Division
Office of Site Remediation Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460

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ACKNOWLEDGMENTS

MAILING LIST ADDITION FORM

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    U.S. Environmental Protection Agency
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A.   OVERVIEW

In environmental enforcement cases, the defendant/respondent may claim an inability to pay the penalty or environmental expenditure (i.e., contribution to cleanup costs) sought by the U.S. Environmental Protection Agency (EPA). Under the goal of fair and equitable treatment of the regulated community, EPA policy states that the ability of violators to pay should be considered when determining penalty amounts.[1] Inability to pay is identified as one circumstance of "compelling public concern" under which an enforcement case may be settled for less than the economic benefit of noncompliance.[2] EPA policy further explains that such settlements are allowed if "removal of the economic benefit would result in plant closings, bankruptcy, or other extreme financial burden, and there is an important public interest in allowing the firm to continue in business."[3] Nevertheless, if a violator either refuses to comply, has a long history of previous similar violations, or has committed egregious violations, EPA reserves the right to seek penalties that might adversely impact a business, or even put it out of business.[4]

The ABEL model has been used for nearly ten years to evaluate the financial health of corporations. Up to this time, however, a corresponding tool to evaluate the financial status of individuals was not available. The Individual Ability to Pay Model (Indipay) fills this gap.

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[1] This policy is set forth in U.S. EPA, *Policy on Civil Penalties*, February 16, 1984, codified as PT. 1-1 in the General Enforcement Policy Compendium (previously codified as GM-21).

[2] U.S. EPA, *A Framework for Statute-Specific Approaches to Penalty Assessments*, February 16, 1984, Codified as PT. 1-2 in the General Enforcement Policy Compendium (previously codified as GM-22), pp. 12-13.

[3] Ibid.

[4] Ibid. at p. 23; U.S. EPA, *Guidance on Determining a Violator's Ability to Pay a Civil Penalty*, December 16, 1986, codified as PT. 2-1 in the General Enforcement Policy Compendium (previously codified as GM-56).

The Individual Ability to Pay Model is a sophisticated screening tool developed to assist enforcement professionals in evaluating ability to pay claims made by individuals. It is designed to be used principally in negotiations. The Individual Ability to Pay Model is generally not intended for use at a trial or in an administrative hearing. If the Agency is going to present ability to pay testimony in these settings, the Agency should rely on an expert to provide an independent financial analysis.[5]

The Individual Ability to Pay Model is designed to make a preliminary evaluation of the financial condition of private individuals. These individuals may operate businesses as sole proprietorships or partnerships. Gas stations, dry cleaners, and local landfill operators are all examples of small businesses that frequently are organized as sole proprietorships or partnerships. Sole proprietorships and partnerships do not pay any income tax. Instead, the income and expenses generated by the business are paid by the sole proprietor or partner, who reports the income and expenses on his or her personal income tax return. The concept of legal liability for actions taken by a sole proprietorship or partnership parallels this tax treatment in that the owner or partner is *individually* liable for the debts of his or her business. Unlike corporations in which the shareholders' liability is limited to their investment in the firm, the total financial resources of the individual sole proprietor or partner may be garnished for liabilities incurred by their business.[6] Under some circumstances, shareholders in S-Corporations should also be evaluated as individuals using the Individual Ability to Pay Model.[7]

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[5] For assistance with the selection of an expert on ability to pay and financial analysis, EPA staff should call Jonathan Libber, the BEN/ABEL coordinator, at FTS/202 564-6011. For selection of an expert in Superfund and other site remediation cases, contact Tracy Gipson of the Office of Site Remediation Enforcement's Regional Support Division at 202/564-4236.

[6] The Individual Ability to Pay Model can be used to evaluate the ability to pay of partners in both general and limited partnerships. In a general partnership, all of the partners owning a business are individually liable for its debts. Thus the analyst should run the Individual Ability to Pay Model for every partner in the firm. However, since limited partnerships have only one general partner, who is the only partner liable for all the firm's debts, an analyst evaluating its ability to pay should only evaluate the financial condition of that partner.

[7] Consult the EPA or DOJ attorney responsible for the case.

The financial status of individuals is often difficult for enforcement professionals to evaluate because standardized reports similar to a corporation's financial statements or tax return are not readily available. Both a corporation's financial statements and tax returns list its assets, liabilities, income, and expenses. An individual's tax return (e.g., Form 1040), in contrast, provides a statement only of his or her income. Occasionally, an individual or sole proprietorship produces a financial report, but most often these reports are unaudited and, therefore, less reliable. The Individual Ability to Pay Model is designed with this consideration in mind, adapting the ability to pay screening analysis to the most reliable source of individual financial data -- the applicant's federal income tax return. The model also relies on information taken from an individual financial data request form -- a questionnaire completed by the defendant/respondent that itemizes his or her expenses, assets, and liabilities.[8] A copy of this form is provided in Appendix C of this manual.

The Individual Ability to Pay Model provides a consistent and theoretically sound framework for screening evaluations of ability to pay cases involving individuals, sole proprietorships, and partnerships. Using a two-stage process, the model applies standard financial principles and analytical techniques to make ability to pay determinations. Exhibit 1-1 presents a flow diagram outlining the structure and major analytical steps embodied in the model. The analytical processes in each step vary slightly depending on the tax form filed by the applicant, but the underlying methodology presented below and in Exhibit 1-1 is the same.

As shown in Exhibit 1-1, Phase 1 of the model subjects all claims to a quick assessment based on the applicant's income. The data entry for Phase 1 is minimal, requiring only a few minutes to complete. If the applicant's adjusted gross income is less than the low income level for the applicant's household size and county of residence, and there is no evidence that the applicant has significant assets or complex personal finances, then the model concludes that the applicant has no ability to fund a penalty or contribution (i.e., the applicant's ability to pay claim is valid). However, if the applicant's adjusted gross income exceeds the low income level or there is evidence that the applicant has

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[8] For partnerships and sole proprietorships, the assets and liabilities of the business should be reported on the individual financial data request form completed by the liable partner(s). The business's income and expenses are reported directly on the partners' income tax returns.

significant assets or complex personal finances, the model instructs the analyst to proceed to Phase 2.

In Phase 2, a more comprehensive ability to pay analysis is made, evaluating the applicant's annual cash flow, living expenses, debt obligations, assets, and liabilities. While this section of the model is designed to provide a thorough analysis of the applicant's finances, the model is still a screening tool which uses a limited amount of information. When the applicant has very complicated finances, the user should seek the assistance of an expert, and at various points in the Phase 2 analysis the model may prompt the user to do so. Data entry and verification required for a typical Phase 2 analysis will take approximately thirty to forty-five minutes. Once input, the model processes the data, culminating in a summary of the applicant's financial status and capacity to fund a penalty or contribution. This analysis provides the model's user with valuable information regarding the applicant's financial situation. It is important to note, however, that individual ability to pay cases require considerable judgment. For instance, analysts must often evaluate whether an applicant's living expenses are over- or understated or determine whether particular assets are available for payment. The model is designed to help with these judgments, but final determination of the appropriate penalty or contribution ultimately is a decision only the enforcement professional can make.

The user should be aware that, like the ABEL model, the Individual Ability to Pay Model calculates an applicant's ability to pay a penalty or contribution levied in the future based upon past income and expense levels. Therefore, if the applicant indicates that his or her finances will change substantially in the next several years, the Individual Ability to Pay model may provide an inaccurate ability to pay estimate. In such cases, the user should consult a financial expert.

Placeholder for Exhibit 1-1 (Same as Exhibit 1 in final protocol memo]

B.   HOW TO USE THE MANUAL

This manual provides instructions for using the Individual Ability to Pay Model. These instructions illustrate the model with a hypothetical example and demonstrate a typical model run.

Chapter 2 describes the preliminary steps needed to use the Individual Ability to Pay Model, including how to access the model on EPA's national LAN. Chapter 3 provides a step-by-step guide for each of the model's screens. These instructions demonstrate the mechanics of using the model. Chapter 4 describes the model's results and output, and explains how to change input values for subsequent runs. Appendix A provides the model's equations and describes the ability to pay calculations. Appendix B contains a complete set of the model's screens for a hypothetical ability to pay case. Appendix C provides a copy of the Individual Financial Data Request Form that the applicant must complete. Finally, Appendix D provides a reference table for users unfamiliar with the Windows^{TM} environment.

Help information is available in the program if you need a variable defined, guidance on information sources, or help with the format required for an input entry. To access help, click the "Help" button located at the base of each screen or press the F1 key. If you need assistance in operating the program, understanding the results, or other guidance in using the model, contact Jonathan Libber, the BEN/ABEL Coordinator at FTS/202 564-6011. For questions specific to Superfund and other remediation cases, contact Bob Kenney, Office of Site Remediation Enforcement, Policy and Program Evaluation Division at 202/564-5127.

The Individual Ability to Pay Model is an interactive computer program designed to run on IBM-PC compatible computers in the Windows™ environment. This chapter presents a detailed description of procedures for using the Individual Ability to Pay Model to evaluate an individual's financial health. For an in-depth description of each variable and recommended sources of information, see Chapter 3.

Chapter 2 is divided into five sections. Section A describes how the computer program is structured, and provides an overview of the choices that the Individual Ability to Pay Model presents during program execution. Section B explains the procedures for starting the program on your computer. Section C provides data format requirements and additional helpful hints for entering data at your computer workstation. This section also illustrates the error messages the model provides if you fail to enter data properly. Section D explains the procedures for ending the program. Section E provides you with an overview of the options for printing and exporting your results.

A.   STRUCTURE OF THE PROGRAM

1.   Overview of the Model

As discussed previously, the model is divided into two phases. Phase 1 provides a quick ability to pay screening based on the applicant's income level and complexity of financial condition. If the applicant has low income with limited assets and simple finances, the model will conclude that the applicant is unlikely to be able to fund a penalty or contribution. In these instances, the model recommends that you discontinue the ability to pay analysis. Alternatively, the model may conclude the applicant has income greater than the low income threshold or possesses significant assets or complex finances. In these cases, the model will recommend that you proceed with a Phase 2 analysis.

Phase 2 is a more in-depth screening analysis of the applicant's assets, liabilities, cash flow and debt capacity. These components of the applicant's financial condition comprise the possible funding sources for a penalty or contribution. At the end of the Phase 2 analysis, the model provides a comprehensive summary of the applicant's ability to pay, comparing each potential funding source to the penalty or contribution sought by EPA.

2.   Data Requirements

Before you use the Individual Ability to Pay Model, you must obtain the individual's *signed* and *complete* tax forms, including all relevant schedules and attachments.[9] Although the Phase 1 analysis can be undertaken with just the most current tax return, you should use the three most recent years of tax information, if possible. The Phase 1 analysis screens out low-income applicants with simple finances; however, the analysis for most applicants will likely proceed to Phase 2. Information from the individual's financial data request form, in addition to his or her tax forms, is required for the Phase 2 analysis. As a result, you may want to collect both the individual's tax returns and

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[9]   Because of increased use of falsified tax returns, OECA also strongly recommends that each individual evaluated be required to sign IRS Form 8821 which authorizes IRS to release the individual's tax returns to EPA. (IRS forms are available from your nearest IRS Disclosure Office.) Under no circumstances should users accept unsigned returns.

financial data request form before using the model.[10] You can print blank financial data request forms directly from the Individual Ability to Pay Model.[11]

3.   Overview of Computer Program

This section describes the program's structure. A detailed description of the sequence and content of the individual screens is provided in Chapter 3.

The model operates in the Windows^{TM} (Version 3.1) environment.[12] The novice Windows^{TM} user may consult Appendix D for instructions on elementary Windows^{TM} functions. Each screen prompts you for specific information and will not allow you to continue until you respond to the prompts. Within each screen you can enter information in any order you wish, and make necessary edits. Once you complete each screen, click the "Continue" button at the bottom of the screen to save your inputs and continue with the next step of the program. Alternatively, you can click the "Cancel" button to exit without saving any input or revisions to input that you have made for that particular screen.

To access an explanation of the information required at any point during your use of the model, simply press F1 or click the "Help" button. The help screens provide context-sensitive assistance, including information pertaining both to running the model and understanding and interpreting the model's input and output values.

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[10] The Office of Enforcement and Compliance Assurance highly recommends that you request the three most recent years worth of Federal tax returns and the financial data request form in a single request. In the experience of many EPA regions, applicants are most responsive to the initial request. Many applicants, particularly individuals, ignore subsequent requests because they believe they have already responded.

[11] To do so, follow the directions in Section A of Chapter 3 for accessing the "Main" screen (Exhibit 3-2). Click your mouse on the icon entitled "Data Form" located on the right-hand side of the screen.

[12] If you are not familiar with the Windows^{TM} computing environment, consult a Microsoft Windows^{TM} user's guide.

Once you access the model, the first screen will prompt you for initial information about the user (i.e., you) and where you would like output files stored. The second screen represents the "main" screen of the model -- here you select a case to examine, begin data entry or data editing, and undertake a Phase 1 or 2 analysis. You will be referred back to this screen after you complete a given task, such as data entry or editing.

After you indicate whether the case is existing or new in the second screen, you are now ready to input or edit case information. For a new case, you will be prompted for basic case information (e.g., applicant's name, address, number of years of tax information available, year of latest tax return). From the main screen, you then select the "Input" button under Phase 1 to enter the income data needed to perform the Phase 1 analysis. Then select the "Data Summary" option to verify the information you have input. You can now run the Phase I analysis by selecting the "Run Phase 1" button. For an existing case, proceed directly to the "Input" button under Phase 1 to make any changes to the data before conducting the Phase 1 analysis. Data input for the Phase 1 analysis should take about five to ten minutes for each new case.

The Phase 1 result will either recommend that the applicant's ability to pay claim be accepted (i.e., applicant is low-income with uncomplicated personal finances and, therefore, cannot pay the penalty or contribution) or that the applicant's claim be subjected to a comprehensive ability to pay evaluation in Phase 2 of the model.

To proceed to Phase 2 for a new case, select the "Input" button under Phase 2 to initiate a series of detailed data input screens. Again, the "Data Summary" button should be selected after you have completed the data input to verify your entries. Entering and verifying Phase 2 information should take approximately thirty to forty-five minutes per case. Select the "Run Phase 2" button to initiate the Phase 2 analysis. For an existing case, you can choose only the Phase 2 data entry screens that you wish to edit.

The Individual Ability to Pay Model displays the results of your calculations on your computer screen and allows you to save your cases for later printing or for further modification. When you are

finished, you can choose to run the program again or end the program session. If you run the program again, you can change one or more of the data inputs from your previous run. You can then re-calculate the ability to pay analysis without having to re-enter all of your input values. These procedures are described in more detail in Chapter 3.

B.   GETTING STARTED

The Individual Ability to Pay Model requires the following equipment to operate:

- •   PC-compatible 386 (or faster) computer

- •   Windows™ (Version 3.1) operating system

- •   Monitor with 800 x 600 or greater resolution

- •   Mouse (or other pointing device)

The remainder of this section describes how to access the Individual Ability to Pay Model from EPA's national local area network (LAN) and also how to install and run the model on a PC with a hard drive.

1.   Installing from EPA's National LAN

If this is your first time using the Individual Ability to Pay Model, find out from the LAN administrator in which directory the model is installed. Then, enter Program Manager within Windows™. From the menu bar, click "File", then "Run". Then type "drive:\directory\ LAPPINST.EXE" using the drive and directory names given by the LAN administrator. Then click "OK." If you receive a warning message that you cannot copy the file, click "OK." It is merely notifying you that the setup for the model already exists on your version of Windows™.

The Individual Ability to Pay Setup Screen will come up. In this screen you are required to denote a separate directory in which to store the program. Enter the name of the directory of your choice. You may also enter the name of a directory that does not yet exist, and the program will create it for you. It is extremely important that you not enter a root directory (e.g., c:\ or f:\) here; you must specify a subdirectory. After you have typed in the name, click "Continue." The computer will then copy the files into your selected directory and issue a completion notice which in some

cases, also notifies you that before all model features take effect, you must exit and restart your Windows™ system. If this occurs, the installation utility asks if you would like to exit and restart immediately. Click "Yes" if you want the installation utility to automatically exit and restart your Windows™ system. If you click "No", the installation utility will return you to the Program Manager. In both cases, the "EPA Models" program group will appear containing the program icon for the installed model.

2.   <u>Installing to a PC from Floppy Disks</u>

If you have access to the two floppy disks containing the PC version of the Individual Ability to Pay Model, you can load the program onto your hard drive. First, insert Disk 1 into a floppy drive (probably drive A or B).   Then, enter the Program Manager in Windows™. If you have any other applications running within Windows™ (e.g., word processing software, clock, e-mail), close them. Within the Program Manager screen, go up to the Menu bar, click "File", then click "Run." In the command line of the Run dialogue box, enter "a:\setup.exe" (or "b:\setup.exe" if the floppy is in the B drive). Then click "OK." If you receive a warning message that you cannot copy the file, simply click "OK." It is merely notifying you that the setup for the model already exists on your version of Windows™.

The Individual Ability to Pay Setup Screen will come up. In this screen you are required to denote a <u>separate</u> directory in which to store the program. Enter the name of the directory of your choice. You may also enter the name of a directory that does not yet exist, and the program will create it for you. It is extremely important that you <u>not</u> enter a root directory (e.g., c:\ or f:\) here; you must specify a subdirectory. After you have typed in the name, click "Continue." The computer will then copy the files into your selected directory. It will prompt you to insert Disk 2, at which point you should remove Disk 1 from the floppy drive and insert Disk 2, then click "OK." The program will give you a completion notice which, in some cases, also notifies you that before all model features take effect, you must exit and restart your Windows™ system. If this occurs, the installation utility asks if you would like to exit and restart immediately. Click "Yes" if you want the installation utility to automatically exit and restart your Windows™ system. If you click "No", the

installation utility will return you to the Program Manager. In both cases, the "EPA Models" program group will appear containing the program icon for the installed model.

Once the Individual Ability to Pay Model has been loaded onto your hard drive, simply double-click the model icon to start the program.

C. MODEL ATTRIBUTES

The following sections illustrate the key attributes of the model, including the general features common to every screen displayed in the model, format of data entries, the help system, how to correct entry errors, and error messages generated by the model. Note, however, that a complete description of each screen is provided in Chapter 3.

1. General Features of the Model Screens

You must enter certain basic information before the program will allow you to proceed to the next window. You can move directly to each input item using your mouse or tab key. If you click the "Continue" button located at the bottom of the screen before entering required information, the cursor will return to the first line of missing information to prompt your entry. At any time you can move around the screen to edit an entry that you have already made by using your mouse or tab key.

2. __Format of the Data Entries__

The Individual Ability to Pay Model is very flexible regarding the format of data entries that it will accept, unlike some non-Windows^{TM} models that require specific entry formats (e.g., numerical values cannot be entered with commas, dollar signs, or percent signs). For example, the input screen in Phase 1 of the model requires the user to input the adjusted gross income from the applicant's federal tax form. Suppose that this figure is $45,600. The user can enter that figure as "45600", "45600.00", "45,600", or "45,600.00." The model will record any of these inputs as $45,600.00. The same is true for all other inputs.

Be careful to use only the number keys to enter numerical values. A common mistake is typing the lowercase letter **L** instead of a number 1. Another error occurs when the capital letter **O** is typed instead of the number 0 (zero). The model cannot adjust for figures that are input with a mix of numbers, letters, and characters other than commas, decimal points, and negative signs. For that reason, do not include a dollar sign ($) in any entries. Negative dollar amounts should be entered with a minus sign before the amount, rather than parentheses around the amount, e.g., "-45600" rather than "(45600)".

3. __Help System__

As noted previously, the user can easily access the help system by either pressing the F1 key or clicking the "Help" button. The help feature allows the user to obtain assistance in both running the model and understanding the model's output. When you have entered a help screen, you will see either the help topic and a brief explanation (if there is only one help topic for that screen) or a listing of the various help topics available. From such a list you may click directly on the name of any particular topic to bring up a secondary help screen which will explain that topic. In some cases the help explanations may parallel explanations in this manual, or may refer you to this manual for further assistance.

4. Correcting Typing Errors

After typing your entry, you might discover that you have typed an incorrect letter or number. If you have not yet clicked the "Continue" button at the base of the window, correcting the mistake is straightforward. Simply click the entry containing the error and correct it. For example, if you typed 100,234 and want to delete one of the zeros, you would simply click the offending input box and correct the figure (i.e., 10,234).

It is extremely important for you to *verify* your data inputs so that the computer conducts the analysis using the correct information. You may do so by examining them on the screen as well as comparing the written input summary with the applicant's tax forms and/or financial data request form. Most people find that they can perform a better audit by checking the written summary than they can by checking the input window on the computer screen. For that reason, the model includes data summaries in its printouts. To generate these summaries, select the "Data Summary" buttons under Phases 1 and 2 and click the "Print" button at the base of each data summary screen produced.

If your inspection of the data inputs reveals that you have made an error, exit back to the main screen, then work your way to the data input screen containing the error to correct it.

5. Error Messages

The model will notify you if you have made an error that prevents the model from conducting either a Phase 1 or a Phase 2 analysis. These errors generally include the lack of input information integral to the model's calculations. In such cases, the model will prompt you to return to the missing or inaccurately entered data before continuing with the ability to pay analysis. The model will also double-check that you want to erase any changes made to the screen when you attempt to "cancel" to exit a screen, so that you do not accidentally lose revisions. In such cases, the model will issue a warning like the following:

<<<GRAPHIC NOT AVAILABLE>>>

By canceling to exit a screen, you will only lose changes made to that particular screen; you will not lose edits to any previous screens.

D.   ENDING PROCEDURES

A key feature of the Individual Ability to Pay Model is the ability to save your interim data inputs and Phase 1 and 2 analyses as you work through a case. Each time you enter data into a particular screen and click the "Continue" button, the model will automatically save your data inputs. This attribute is particularly convenient if you are interrupted during use of the model. If you have saved your data input, you can exit the program and when you return, all of the information will be stored in a case file displayed on the "main" screen. Similarly, you can also find any interim Phase 1 or 2 results that you have saved in the case file.

If, after entering data into a particular screen, you do not wish to run the analysis with that data, you can click the "Cancel" button rather than clicking "Continue." The computer will ask you to verify that you wish to erase the inputs or changes to input which you have just entered on that screen. If you click "OK," you will exit the screen and any inputs that you just entered will be deleted; the screen will return to its previous status. Any inputs made to other screens will not be erased, however. If you realize only after clicking "Continue" that you do not wish to run the analysis with data from a screen, you must re-enter the screen and change the data, then click "Continue" to save the changes.

After completing a case, you may wish to "export" your results to another user or directory. All of your case files are stored together within the model in a single file called "IAPCASES.MDB" located in the directory specified as your output directory in the first screen of the model (see Chapter 3, Exhibit 3-1). You may transfer these files by clicking the "Export" button on the "Main" screen. In the subscreen, denoted "Select Cases for Export," choose the case or cases you wish to export by single-clicking each case name. If you wish to export all the cases you may click the "All" button to the right of the case name list. Then, select the directory or subdirectory into which you want your case files transferred by clicking it. You may also create a new subdirectory for your cases by clicking the box titled "Create New Subdirectory" and typing in the name of your choice. A new subdirectory with that name will appear under the directory currently selected in the Destination Directory box. Finally, click the "Export" button. The model will issue a prompt asking if you wish to continue to export; click "Yes." A message will come up notifying you of the successful exporting

of your files. *Note that this procedure will replace any existing Individual Ability to Pay cases which may previously have been in the destination directory with the exported files.*[13]

E.   PRINTING OPTIONS

The Individual Ability to Pay Model allows you to print both the summaries of your Phase 1 and 2 data inputs and the results of the Phase 1 and 2 analyses. To print data input summaries for either Phase 1 or Phase 2, simply click the "Print" button located at the bottom of each associated screen. To print the Phase 1 analysis, click the "Print Analysis Output" button in that screen. Note that this will print both the analysis and the associated data input summary. Finally, if you wish to print the entire Phase 2 analysis, select the "Print" button at the upper right corner of the Phase 2 Analysis screen after selecting all of the output pages listed within the box (if you wish to print only some of these, either enter the desired screens and click the "Print" button in each individual screen, or select only those you need from the box on the Phase 2 Analysis screen by clicking their names).

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[13]   Alternatively, you can export cases using the File Manager application in Windows™. Copy the "IAPCASES.MDB" file, which contains all of your existing cases, to another directory in order to transfer information about any particular case to that directory. Again, note that any cases which were previously in the receiving directory will be erased through this procedure.

The Individual Ability to Pay Model evaluates the capability of an individual to pay a specified penalty or environmental cleanup contribution. This evaluation is completed in two stages and, hence, data input also occurs in two stages. In Phase 1, a quick assessment of the individual's income is completed based only on information from federal income tax forms. Therefore, the data requirements for the Phase 1 analysis are minimal.

An applicant with income above the low-income threshold or with complex personal finances is subject to a comprehensive Phase 2 ability to pay screening analysis. Phase 2 requires input of a large number of variables from both the individual's federal income tax forms and financial data request form. In some cases, the complexity of the applicant's finances may exceed the analytical limits of the model. In such situations, the user should consult a financial expert.

This chapter provides a screen-by-screen explanation of the model. Screens from a hypothetical case accompany the discussion. Each explanation describes how to maneuver within the Windows™ environment, the data inputs required by the screen, and the model's response to the inputs. Section A describes the inputs required for Phase 1 of the model's analysis, including basic information about the applicant and information required from the applicant's federal income tax forms. Section B discusses the Phase 2 data input. The user enters information from the applicant's income tax forms as well as from the applicant's financial data request form. Section C discusses the mechanics of conducting and printing the Phase 2 analysis. (A more thorough discussion interpreting the Phase 2 analysis is provided in Chapter 4). Finally, Section D discusses the procedures for altering the standard values used in the Phase 2 analysis.

A.   PRELIMINARY CASE SCREENS

The Individual Ability to Pay Model is accessed by double-clicking the "Indi-Pay Model" icon located on your computer's program manager screen. After accessing the model, three preliminary case screens will successively appear.

1.   Welcome Screen

The first screen that appears is the "Welcome" screen, as shown in Exhibit 3-1. The first time you use the model, you will be required to provide a) your user name, b) the EPA region under which the case falls, and c) the location of the output directory where you would like all output files stored on your computer system.

In the example provided in Exhibit 3-1, the user name is "Sue Blue." For your purposes, you may want to type your full name here or your initials. The EPA region is Region 5. You may select the region by clicking the down-pointing arrow to pull up a menu of choices that includes all ten EPA regions, EPA headquarters, and "Other" (for non-EPA users). Click your choice.

The output directory where files will be stored for Sue Blue is "C:\SUEBLUE\INDIV". In order to select an output directory, click the downward arrow key to the right of the drive box and click the appropriate drive. Then double-click the drive in the directory box to obtain a list of directories from which you may double-click the one you choose. You may then select subdirectories by double-clicking the name of your selected directory and choosing a subdirectory from the list that appears. ***Do not*** save your output to the same directory in which the Individual Ability to Pay Model is stored. Designate a separate directory for your output. For example, before starting the model, you may wish to create a subdirectory called "INDIV" within your own personal directory in which to store your output file.[14]

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[14]   Note that the model saves all of the cases you create within a single file called "IAPCASES.MDB" on the output directory you specify in the "Welcome" screen. If you need to copy or transfer case information to other users, you should specify separate output directories on which to store such cases.   In this way, you can more easily identify the appropriate "IAPCASES.MDB" file to transfer.

Exhibit 3-1

"Welcome" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Whenever the user specifies a new output directory, the model will automatically issue a warning message before allowing the user to continue which alerts the user that no case files currently exist in the specified directory. The model then asks if you want to create a new case file. Clicking "Yes" allows you to create and save cases in the new directory; clicking "No" prevents you from continuing further in the model.

After providing this information during your first use of the model, future model runs will always show the user name and output directory you initially designated. Simply click the "Continue" button if these inputs continue to be valid. Alternatively, you can change them at any time.

2.   Main Screen

The second screen that appears in the Individual Ability to Pay Model is the "Main" screen, as shown in Exhibit 3-2. This is the screen that serves as the controlling screen of the program, and you execute the various stages of the model through it.

First, you need to designate the case you wish to examine. When you run the model for the first time, or have a new case to analyze, click the "New" button. This selection will trigger the "Case Description Details" screen, in which you record the basic case information (see Section 3). If, on the other hand, you have used the model and saved the associated case files, your case files will be listed in the top box. If you want to work on an existing case, click the case name to select it, and then click the "Edit" button.

In the example given in Exhibit 3-2, the analyst (Sue Blue) previously entered information about three cases — "Betty Bourgeois," "Fred Flashy," and "Mitch Miserly." If Sue Blue wanted to re-examine the Flashy case (or was interrupted before she finished entering all of the financial data

needed for the Flashy case), she would simply move her mouse and click "Fred Flashy" to select this case. She would then move her mouse to the "Edit" button and would click it to revisit this case. If Sue Blue wished to enter information for a new case, she would instead move her mouse to the "New" button and click to indicate that she wanted to begin work on a new case. Thus the next screen, allowing her to enter the case name and other information about the applicant, would appear.

Exhibit 3-2

"Main" Screen

<<<GRAPHIC NOT AVAILABLE>>>

After you select the case, you must indicate which phase of the model you want to execute. If you are working on a new case, you must select the "Input" button under Phase 1. This selection will trigger a series of data input screens (described in Section B below). If you select any other option, an error message will appear telling you that no Phase 1 data exists. If you are working with an existing case for which you have already entered Phase 1 data, you can select any of the options listed under Phase 1. Similarly, if you have already entered the Phase 2 data, you can select any of the options listed under Phase 2.

If you want to delete a case, first select the case. Then click the "Delete" button. The model will ask you if you are certain you wish to delete the case. Clicking "OK" permanently erases the case from your case files.

You may also wish to copy or export a case or group of cases. Copying cases is an efficient way to run various analyses of a single applicant, in which you change one or two variables in the case input and re-run the analysis to determine the effect of altering these variables on the applicant's ability to pay. Exporting cases allows you to select a particular case or group of cases and save it in a different output directory from that which is specified on the "Welcome" screen. This is useful if, for example, you have several analyses of a single applicant which you would like to keep separate from other Individual Ability to Pay cases or if you would like to send another analyst a copy of a

particular case or group of cases. The procedures for copying and exporting cases are described in Section E of this chapter.

If you wish to print a blank copy of an individual financial data request form to send to an applicant, you may click the "Data Form" button on the right side of this screen and the model will generate one for you.

Finally, to exit the Individual Ability to Pay Model, click the "Exit" button on the lower right-hand side of the screen. The model will issue a message informing you that it is updating the databases to save the information entered during your session. Then the model closes.

3.   Case Description Details Screen

If you are using the model to examine a new case (and clicked the "New" button on the "Main" screen), the "Case Description Details" screen will appear, as shown in Exhibit 3-3. You must supply case description information for every case. In the top box, provide the following case information:

- **Name:** Provide the name of the individual. The model accepts names of up to 40 letters in length.

- **Street Address:** Provide the applicant's street or mailing address. The model accepts addresses of up to 30 characters in length.

- **City**: Provide the applicant's city or town of residence. The model accepts names of up to 20 letters in length.

- **Zip**: Provide the applicant's 5-digit zip code.

- **State**: Provide the applicant's state of residence. Note that you may either type in the first letter of the standard two-letter abbreviation and click the appropriate state beginning with that letter in the menu bar, or click the downward arrow key to the right of the input box (i.e., menu bar) to trigger a menu listing the abbreviations of all 50 states and the District of Columbia.

- **County**: Provide the name of the county in which the applicant resides. Again, you can either begin entering the name and click the appropriate county brought up on the menu bar, or click the downward arrow key to the right of the input box to trigger a menu listing all of the counties in the state. Note that there may be more than one entry for some counties located in the Northeast. Select the pertinent subdivision. Click your selection.

- **No. Members of Household:** Based on the applicant's most recent tax form, provide the number of persons in the household.

Exhibit 3-3
"Case Description Details" Screen
<<<GRAPHIC NOT AVAILABLE>>>

- **No. of Years of Tax Info**: Enter the number of years of tax information submitted by the applicant.

- **Most Recent Year of Tax Info**: Enter the year of the most recent tax form submitted by the applicant (e.g., 1994). Note that you should enter the year in 4-digit form, not 2-digit.

In the example displayed in Exhibit 3-3, the applicant, Fred Flashy, lives on 20 Cherry Hill Road in Chicago, Illinois. The city of Chicago is located in Cook County. Mr. Flashy claimed two people in his household on his latest federal income tax form. He submitted three years of income tax forms of which the most recent was his 1995 tax form.

Next, provide the information requested in the lower portion of the "Case Description Details" screen:

- **Name**: Enter your name (or initials).

- **Statute**: Enter in the statute involved in your case's enforcement action by clicking the downward-pointing arrow to view and select the relevant statutes or "Other." Click your choice.

- **Penalty or Contribution Sought**: Enter the amount of the penalty or contribution sought by EPA. If you enter 0, or neglect to enter any value, the program will calculate the maximum contribution the applicant can afford.

- **Run Description:** If you would like to perform multiple analyses of an applicant, enter a description here which identifies the unique characteristics of this run. By doing so, you can copy the case under the same applicant name and use varying run descriptions to differentiate each version of the case.

As Exhibit 3-3 shows, Mr. Flashy is liable under the FIFRA statute for a penalty totalling $50,000. The description for this case is "$50,000 Run."

After entering the data for the "Case Description Details" screen, click the "Continue" button. The program will issue a prompt stating "You have made changes to this case. Would you like to save them?" By clicking "Yes", your data will be saved. Clicking "No" will erase the data you have entered and return you to the "Main" screen.

B.   PHASE 1 DATA ENTRY SCREENS

After clicking "Yes" to save your data in the "Case Description Details" screen, you will return to the "Main" screen (see Exhibit 3-2). You can now enter the Phase 1 data from the applicant's tax forms. Click the "Input" button to begin.

1.   Tax Form Details Screen

After clicking the "Input" button, a new screen entitled the "Tax Form Details" screen will appear, as shown in Exhibit 3-4. This screen verifies the filing status of the applicant and the type of tax form the applicant filed. The screen in Exhibit 3-4 indicates that the applicant, Mr. Flashy, furnished three years of tax information, 1993, 1994, and 1995. In all three years, the applicant filed a joint return (i.e. was <u>not</u> married filing separately), and filed form 1040.

If you want to change any of the tax form information, simply use the mouse and click the appropriate filing status. The program will automatically adjust the screens called up later when prompting you for the entry of tax information according to the filing status entry made in this "Tax Form Details" screen. Then, click the appropriate tax form for each year. If the applicant is married filing separately, you will also need to check the appropriate form under the "Spouse" column. After completing your entries, click the "Continue" button to proceed to the next screen.

2.   Phase 1 Data Input Selection Screen

The next screen is the "Phase 1 Data Input Screen Selection" screen, as shown in Exhibit 3-5. This screen allows you to choose the particular year of the applicant's tax data to view or edit. If you are beginning a new case, select the year for which you want to begin entering data by clicking the appropriate row. Note that in the example shown in Exhibit 3-5, the rows titled "Spouse's Tax Return Data for ..." are light grey (i.e., disabled) indicating that entering tax data for the applicant's spouse is unnecessary for the current case (i.e., the applicant's filing status is <u>not</u> married filing separately). Then click the "View/Edit" button to proceed with tax form data entry. To return to the "Main" screen, click the "Exit Input" button.

3.   Tax Form Data Input Screens

When you choose to "View/Edit" tax data, a Data Input Screen will appear that corresponds to the tax form type you specified in the "Tax Form Details" screen. In the example, the applicant used Federal Tax Form 1040 and filed jointly. As a result, the "Phase 1 - 1040 Data Input" screen is the next to appear, as shown in Exhibit 3-6. The screen asks for information directly from the tax form, referencing you to the line on the tax form where you can find the information. Enter the

amount of adjusted gross income in the top box. Then answer the remaining questions by clicking those you wish to answer affirmatively. In the example shown in Exhibit 3-6, the applicant had an adjusted gross income of $60,100 in 1995 of which part was derived from tax-exempt interest, capital gains or losses, and rents, royalties, partnerships, estates, or trusts.

After entering this information, save your data by clicking the "Continue" button. The model will now ask you to complete the same entries for each of the remaining years for which tax forms are available. After completing the data input for each of the remaining years, clicking the "Continue" button one more time will automatically return you to the "Phase 1 Data Input Screen Selection" screen (as shown in Exhibit 3-5). If you would like to view the entries you just made for a particular year, click the appropriate row and then click the "View/Edit" button. When you are finished with data entry and checking your input, click the "Exit Input" button to return to the "Main" screen (i.e., Exhibit 3-2).

You have now completed the data input requirements for Phase I. To view a summary of the data entered, click the "Phase 1 Data Summary" button on the "Main" screen (i.e., Exhibit 3-2). The "Phase 1 Data Input Summary" screen is shown in Exhibit 3-7. You should print the "Phase 1 Data Input Summary" screen (click the "Print" button at the base of the screen) in order to carefully check the values. If you recognize any errors in the data inputs, note them and then go to the data input screen containing the error to correct it. After checking the accuracy of the data inputs, you can proceed to the Phase 1 analysis. If you noticed an error, press the "Return" button to return to the "Main" screen (as shown in Exhibit 3-2), and repeat steps 1 through 3 above to correct the mistaken entry.

Exhibit 3-4

"Tax Form Details" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-5

"Phase 1 Data Input Selection" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-6

"Phase 1 - 1040 Data Input" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-7
"Phase 1 Data Input Summary" Screen

<<<GRAPHIC NOT AVAILABLE>>>

4.   **Phase 1 Analysis**

After returning to the "Main" screen (as shown in Exhibit 3-2), click the "Run Phase 1" button to initiate the Phase 1 analysis. The results of the analysis will automatically appear in the "Phase 1 Analysis" screen, as shown in Exhibit 3-8. The Phase 1 conclusion is determined by two factors: (1) the applicant's income relative to income in the same geographical area, adjusted for the applicant's household size, and (2) the complexity of the applicant's finances.

The top box in this screen, "Income Comparison", provides a measure of the applicant's income relative to the low income level of the applicant's county of residence and adjusted for the applicant's household size. In the example shown in Exhibit 3-8, the applicant's average adjusted gross income of $70,683.11 exceeds the low income level for a household of two in Cook County ($34,800).

The middle box summarizes flags that signal the complexity of the applicant's financial status. In Exhibit 3-8, three flags appear for the applicant, Mr. Flashy, indicating that he received tax-exempt interest income, capital gains or losses, and income or losses from rents, royalties, partnerships, estates, or trusts.

The Phase 1 conclusion is presented in the bottom box. The example shown in Exhibit 3-8 recommends that the analyst proceed to a Phase 2 analysis. If you would like to print the output,

click the "Print Analysis Output" button. Click the "Exit Phase 1 Analysis" button to return to the "Main" screen (i.e., Exhibit 3-2). You can now proceed to the Phase 2 analysis.

C.   PHASE 2 DATA ENTRY SCREENS

When you are ready to conduct a Phase 2 analysis, from the "Main" screen (i.e., Exhibit 3-2), click the "Input" button under the Phase 2 heading.

1.   Phase 2 Data Input Screen Selection Screen

When you click the input button, the "Phase 2 Data Input Screen Selection" screen will appear, as shown in Exhibit 3-9. This screen lists the different types of information you must enter in order to conduct the Phase 2 analysis. Entering all of this information typically takes 30 to 45 minutes. The screen separates the information into three categories according to its source -- federal income tax form; model parameters; and financial data request form. You must enter the tax form and financial data request form information. For a new case, you may begin entering the applicant's financial data in any order you desire (i.e., you may enter information from the financial data request form first, if desired). For an existing case in which you are changing or correcting an input, simply click the particular piece of information you would like to edit.

2.   Phase 2 - 1040 Data Input Screens

Under the Tax Data category on the "Phase 2 Data Input Screen Selection" screen, select the year for which you want to enter tax data for the applicant. The "Phase 2 - 1040 Data Input" screens will appear, as shown in Exhibit 3-10. Fill in the applicant's tax details for the appropriate year as requested in the series of boxes. For easy reference, each input request lists the corresponding line on the tax form containing the required information. After completing the tax data inputs for a particular year, save your data and move to the next screen by clicking the "Continue" button. In the example shown in Exhibit 3-10, Mr. Flashy's total wage income from line 7 of his 1995 income tax form was $40,000. He further earned $5,000 in tax-exempt interest income (shown on line 8b of his tax form), $4,000 in capital gains (line 13 of his tax form), $7,000 in other income (line 21 of his tax form), $8,500 in partnership or S corporation income (line 31 on Schedule E of his tax form), and sustained a loss of $2,000 from an estate or trust (line 36 on Schedule E of his tax form). Mr. Flashy,

in addition, paid $3,000 in real estate taxes (line 6 of Schedule A of his tax form) and declared a home mortgage interest deduction of $9,600 (line 14 on Schedule A of his tax form) in 1995.

After you have clicked the "Continue" button, another pair of "Phase 2 - 1040 Data Input" screens will appear for the next year of tax data. Continue entering each year's data.   When you click the "Continue" button after all tax data have been entered for all years, the program will automatically show the input screen for the second category of Phase 2 input: model default values.

Exhibit 3-8

"Phase 1 Analysis" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-9

"Phase 2 Data Input Screen Selection" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-10

"Phase 2 - 1040 Data Input" Screens

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-11

"Model Default Values" Screen

<<<GRAPHIC NOT AVAILABLE>>>

3.   Model Default Values Screen

The "Model Default Values" screen is shown in Exhibit 3-11. As in the corporate ability to pay model, ABEL, certain predetermined default (or standard) values are programmed into the model in order to produce the Phase 2 conclusions. These standard values are updated annually by EPA. You should not adjust these values unless you are prompted to do so later in the model or you have case-specific values. These values and their applications are discussed in Chapter 4.

4.   Financial Data Input Screens

You now need to enter the data contained in the applicant's completed financial data request form. These data are broken into twenty sub-categories as shown on the "Phase 2 Data Input Screen Selection" screen (as shown in Exhibit 3-9). To access the first screen, click the "Members of Household" circle under the financial data request form category or click the "Continue" button from the "Model Default Values" screen.

Members of Household Screen

The "Member of Household" screen is shown in Exhibit 3-12. The information on this screen may be helpful to you when reviewing the model's output and results but is not required for the internal calculations made within the model. This optional data includes information about all members of the applicant's household: (1) their names, (2) ages, (3) relationships to head of household, and (4) current employment status. After entering the data for each household member, save your inputs by clicking the "Continue" button, which will move you directly to the next input screen.

Employment for Members of Household Screen

The next screen, "Employment for Members of Household", asks you to enter additional information regarding the employment of the applicant's household members (see Exhibit 3-13). Enter the names of each employed household member, the name of the employer, the number of years employed at the current employer, and their annual salaries. This data is not required for a Phase 2 analysis, but should be entered when possible.

Exhibit 3-12

"Members of Household" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-13

"Employment for Members of Household" Screen

<<<GRAPHIC NOT AVAILABLE>>>

In the example shown in Exhibit 3-13, Fred Flashy has been employed for 6 years at Autoworks, Inc. and currently earns $21,000 per year. Wilma Flashy has worked for 5 years at Architectural Engineering, earning $22,000 per year. After completing these inputs, click the "Continue" button to move directly to the next input screen.

Income Screen

The "Income" screen appears next and is shown in Exhibit 3-14. Enter the income for each relevant category. Next, enter the payment period; click the displayed payment period to bring up a "Period" subscreen in which you can select weekly, monthly, quarterly, or yearly payments. Complete these inputs for both the applicant and the applicant's spouse (if applicable). For those sources providing no income to the applicant, leave the input line blank. When finished, click the "Continue" button.

Current Living Expenses Screen

Next, enter the applicant's expenses in the "Current Living Expenses" screen, as shown in Exhibit 3-15. For each expense item, enter the amount of the expense. Next, enter the payment period; click the displayed payment period to bring up a "Period" subscreen in which you can select weekly, monthly, quarterly, or yearly payments. Leave the accompanying box blank for those expenses that have zero values.

Finally, if the applicant lists expenses or debts other than those appearing on the screen, click the button entitled "Debt" or "Expense." Doing so will cause additional screens to appear to allow you to enter sub-categories of other expenses and debts. The first screen for each sub-category is a "Number of Items in...." screen, as shown in Exhibit 3-16. It asks how many other debt or expense items the applicant has. Enter the appropriate number in the corresponding box. Then, click the "Continue" button. The second screen in this sequence, displayed in Exhibit 3-17, will appear and ask for several specific pieces of information regarding the expense, including the description, amount, and payment period. When finished, click the "Continue" button.

Exhibit 3-14

"Income" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-15
"Current Living Expenses" Screens

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-16

"Number of Items in ..." Screen
<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-17

"Other Expenses" Screen
<<<GRAPHIC NOT AVAILABLE>>>

Asset and Liabilities Screens

The next fifteen sub-categories of data from the financial data request form provide information regarding the applicant's assets and liabilities. With a few exceptions, they follow the same general entry format as that used in the "Other Debt" or "Other Expenses" subscreens of the "Current Living Expenses" screen. The first screen for each sub-category is a "Number of Items in...." screen. It asks how many of a particular asset or liability the applicant has. Enter the appropriate number in the corresponding box. Then, click the "Continue" button. The second screen in this sequence will appear and ask for several specific pieces of information regarding the asset or liability account, typically including the location of the account, the particular type of account, and its dollar value. After finishing each screen, click the "Continue" button to proceed to the next sub-category.

If the user has made an error in entering the number of items for any account, the user may change the number by clicking the "Cancel" button on any screen subsequent to the screen with the error. The user may then re-enter that screen to make the necessary correction.

Bank Accounts: After clicking the "Continue" button at the "Current Living Expenses" screen, the first "Number of Items in...." screen appears (see Exhibit 3-16). The screen will ask, "How many bank accounts do they have [max 10]?" Enter the number, then continue to the next screen, (see Exhibit 3-17) titled "Bank Accounts." The screen asks you for the name of the bank or credit union, the type of account, and its current balance. Enter the corresponding information and click the "Continue" button to proceed to the next sub-category. Note that the only information critical to the analysis is the current balance. You may find the descriptive data helpful to check your data entry and understand your work at a later date, but entering this information is optional.

Remaining Input Screens: The input requirements for the remaining asset and liability sub-categories are discussed below. Each follows a similar screen sequence as described above. Screen examples are not included for these since they are similar to Exhibits 3-16 and 3-17. (A complete set of screens for the hypothetical case is included in Appendix B). These sub-categories include:

- **Investments:** After entering the number of investments on the "Number of Items in...." screen, continue to the "Investments" screen and enter the name of the investment, the number of shares/units, and their total market value. Only the market value for each investment is required; entering the other information is advised, but optional.

- **Retirement Funds and Accounts:** Enter the number of funds or accounts, continue to the next screen, and enter a description of the type of fund or account and its dollar value. Again, only the dollar value for each fund or account must be entered.

- **Life Insurance Policies:** Enter the number of policies. Continue to the next screen and enter the name of the policy holder, the issuing company, the value

3-16

of the policy, and its cash value. Only the cash value for each policy is required.

- **Vehicles used for Commuting:** Enter the number of vehicles used for commuting (maximum two) in the "Number of Items in...." screen. Continue to the next screen and list the vehicles separately along with their dollar values. If desired, enter only the dollar values of each car; information on the make and year of the cars is not required for model calculations.

- **Other Vehicles:** Enter the number of vehicles the applicant owns beyond those used for commuting. Continue to the next screen and list the vehicles separately with their dollar values. Again, only the dollar values are required. Creating a separate category for vehicles that are not used for commuting allows the analyst to easily see in the model's results which vehicles may be unnecessary assets that could be liquidated to find a penalty or contribution.

- **Vehicle Loans:** Enter the number of vehicle loans the applicant has outstanding. On the following screen, enter the relevant information about each loan. Note that only the outstanding amount of each loan must be entered.

- **Real Estate - primary residence:** Because an applicant can have only one primary residence, there is no "Number of Items in...." screen for this sub-category. On the "Real Estate - primary residence" screen, enter the location of the property, a brief description of the property, and its estimated market value. Note that you must enter a value for the applicant's primary residence for the model to run a Phase 2 Analysis, even if the value is zero. For example, if the applicant rents and does not own a home, you must still enter zero.

- **Other Real Estate:** Enter the number of other real estate properties owned by the applicant. The second screen will prompt you for information about each property. Only the market value of each property must be entered.

- **Mortgages & Real Estate Loans:** Enter the number of mortgage and real estate loans the applicant has outstanding. The second screen will prompt you for information about each loan.

- **Personal Property:** Enter the number of personal property items (e.g., furniture, jewelry) on the appropriate "Number of Items in...." screen. The second screen will then prompt you for the name and market value of each item. The market value of each item is the minimum information that must be entered. The applicant and user need only enter these items with a value of over $500, but may aggregate items of lesser value into one category.

- **Furniture & Household Goods Loans:** Enter the number of furniture and household goods loans the applicant has outstanding. You will be prompted for specific information about each loan in the next screen. The amount due must be entered for each loan.

- **Other Assets:** Enter the number of other assets the applicant owns. Continue to the next screen to enter the market value of each item. The applicant and user may aggregate items of small value into one asset category.

- **Credit Cards & Lines of Credit:** On the "Number of Items in...." screen, enter the number of credit cards or lines of credit the applicant has. On the succeeding "Credit Cards & Lines of Credit" screen list each credit card or line of credit, the lending entity, and the amount owed.

- **Other Debt:** If the applicant has debts that were not included in the previous categories (e.g., educational loans), enter them here. The next screen will ask for information about each item in this category.

Additional Information Screen

After completing the last inputs for the applicant's assets and liabilities and clicking the "Continue" button, the "Additional Information" screen will appear, as shown in Exhibit 3-18. Click the "Yes" box where appropriate in response to each of the nine questions. When finished, save the information and click the "Continue" button. Note that you must enter this screen for the model to run a Phase 2 Analysis, even if you do not enter "Yes" for any responses.

In the example shown in Exhibit 3-18, the applicant expects his financial situation to change during the next year and is also a participant or beneficiary of an estate or profit sharing plan. The financial data request form asks applicants to provide a written explanation if any of these boxes are marked "Yes"; this information may prove useful to you later if further questions remain after completing the Phase 2 analysis (see Chapter 4, Section D, "Flags").

5. <u>Review of Phase 2 Inputs</u>

After clicking the "Continue" button at the "Additional Information" screen, the "Phase 2 Data Input Screen Selection" screen will again appear (see Exhibit 3-9). If you wish to review or edit any of your inputs, click the appropriate row then click the "View/Edit" button. The most effective means of verifying data inputs, however, is the data summary function on the "Main" screen (i.e., Exhibit 3-2) for easier review of your data inputs. To access the "Main" screen data summary information, click the "Exit Input" button at the "Phase 2 Data Input Screen Selection" screen (i.e., Exhibit 3-9) to return to the "Main" screen (i.e., Exhibit 3-2). Under the Phase 2 heading, click the "Data Summary" button. The "Summary Screen Selection" screen will appear, as in Exhibit 3-19, allowing you to view and print the tax data summary screen, the financial data request form screen, or the living expenses summary screen. Select a screen by clicking it and then clicking "View."

The "Phase 2 Tax Data Summary" screen, which summarizes the information you entered from the applicant's tax forms, is listed first. See Exhibit 3-20 for an example of this screen. If you wish to print this summary, click the "Print" button. To proceed from the tax summary screen to a summary of the financial data request form click the "Return" button, which will bring you to the "Summary Screen Selection" screen again. Then select the "Financial Data Request Form Data" screen and it will appear as shown in Exhibit 3-21. Print the results as described above or click the "Return" button to exit this screen. You may then select the "Living Expenses Summary" screen from the "Summary Screen Selection" screen. This screen appears in Exhibit 3-22. Again, you may print these results or exit the screen by clicking "Return." From the "Summary Screen Selection" screen click "return" again to proceed to the "Main" menu (i.e., Exhibit 3-2).

Printing each data summary is the best method of verifying data inputs. Carefully cross-check the printed data summaries with the applicant's tax forms and the financial data request form. To correct any errors, proceed to the "Main" menu (i.e., Exhibit 3-2) and select "Input" under the Phase 2 heading. From the next screen ("Phase 2 Data Input Screen Selection" shown in Exhibit 3-9), you can select the particular data item that needs correction.

After reviewing your data inputs for accuracy, you can conduct a Phase 2 analysis. The Phase 2 screens and output options are discussed in the next section.

D. PHASE 2 ANALYSIS AND OUTPUT

To execute the Phase 2 analysis, you must access the "Main" screen (i.e., Exhibit 3-2). From the "Main" screen, click the "Run Phase 2" button. After the model completes the analysis, the "Phase 2 Analysis" screen appears (see Exhibit 3-23). This serves as your home screen as you review the Phase 2 output. The screen is broken into three sections. The top left section, "Detail Screens," serves as the access point for four separate screens which together comprise a complete review of the applicant's financial condition and ability to pay. The first two screens summarize the applicant's financial condition and ability to pay. The last two screens provide an in-depth review of two possible ways an applicant can pay a penalty or contribution -- cash flow and additional debt capacity. Each screen is discussed in detail below.

Exhibit 3-20

"Phase 2 Tax Data Summary Screen"

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-21

"Financial Data Request Form Summary" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-22

"Summary of Living Expenses" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-23

"Phase 2 Analysis" Screen

<<<GRAPHIC NOT AVAILABLE>>>

The top right section, titled "Printing Options," allows you to select the form of the model's printed output. The default print setting selects all sections for printing; if there are particular sections you do not need to print, click their names to erase the "check" in the corresponding box. Click the "Print" button to print the selected screens.

The bottom section, entitled "Issues Affecting Applicant's Ability to Pay," lists "flags," or brief notes affecting the applicant's ability to pay. These flags identify aspects of the applicant's financial condition that are considered unusual or complex. In some cases, flags will advise you to seek the assistance of a financial expert.

If there are a large number of flags, some may be hidden by the screen. You may use the scroll bar to the right of the section to view these "hidden" flags.

1.   **Summary of Applicant's Income Sources Screen**

In the Detail Screens box (as shown in the upper left-hand corner of Exhibit 3-23), click the circle next to the "Summary of Applicant's Income Sources" and then click the "View" button to access the "Summary of Applicant's Income Sources" screen. As you can see in Exhibit 3-24, a summary of the applicant's income sources is provided in the upper box. Income sources are averaged on the right-hand side and yearly income is totaled along the bottom. The same income sources are shown as a percentage of total income in the lower box. The results on the bottom of the screen will note the presence of large variations in total income. If you need additional explanation of the information on this screen, click the "Help" button at the bottom of the screen. If you wish to print this output, click the "Print" button (remember that you can also print all of the output at once from the main "Phase 2 Analysis" screen (i.e., Exhibit 3-23)). Click the "Return" button if you wish to go back to the "Phase 2 Analysis" screen.

2.   **Applicant's Rated Financial Status Screen**

After returning to the "Phase 2 Analysis" screen (i.e., Exhibit 3-23), click the circle next to the "Applicant's Rated Financial Status" and then click the "View" button. This screen gives a summary of the applicant's financial status, as shown in Exhibit 3-25. The top section reiterates the contribution sought by EPA. The second section compares the applicant's income to the median income of households of an equivalent size in the applicant's county of residence. The third section provides a summary of the applicant's cash flow. The fourth section compares the applicant's assets and liabilities and calculates the applicant's net worth. The bottom section provides an assessment

of the ability of the applicant to acquire more debt as a possible source of contribution funds. Chapter 4 provides a detailed description of these measures, but if you require additional explanation while working in the model, click the "Help" button. If you wish to print the results, click the "Print" button. To return to the "Phase 2 Analysis" screen (i.e., Exhibit 3-23), click the "Return" button.

3.   Ability to Pay Scenario 1: Cash Flow Screen

The first possible source of a penalty or contribution from an applicant is cash flow in excess of living expenses. To access this screen, return to the "Phase 2 Analysis" screen (i.e., Exhibit 3-23). Click the circle next to the "Ability to Pay Scenario 1: Cash Flow" row and then click the "View" button. The screen that appears (shown in Exhibit 3-26) is divided into three sections. The top section presents the contribution sought by EPA and the applicant's ability to use cash flow to cover the contribution. The middle section summarizes the model's conclusion regarding the maximum lump sum penalty or contribution the applicant can afford to pay from cash flow. Finally, the bottom section provides a summary of the impacts the penalty or contribution will have on the applicant's financial condition. Note that this result is independent of the results in Scenario 2; the results of the two scenarios <u>cannot</u> be added together. Also, if the model concludes that the applicant can afford a contribution through cash flow, but indicates that such a contribution would cause the applicant's debt payments to exceed 36 percent of annual income (or if debt payments already exceed 36 percent of income), the user may want to make the conservative assumption that the applicant can only afford to pay the smaller of the amounts indicated in Scenarios 1 and 2. Chapter 4 contains a complete discussion of the methods the model applies in determining its ability to pay conclusion.

Exhibit 3-24

"Summary of Applicant's Income Sources" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-25

"Applicant's Rated Financial Status" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 3-26

"Ability To Pay Scenario 1: Cash Flow" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Appendix A contains the mathematical equations used by the model. Within the model, you may click the "Help" button to access additional information about this screen. If you wish to print the results, click the "Print" button. To return to the "Phase 2 Analysis" home screen, click the "Return" button.

4.   Ability to Pay Scenario 2: Loans from Commercial Lenders Screen

An applicant may also be able to borrow money from a lending institution to fund a penalty or contribution. To access the Scenario 2 results, which provide an estimate of the applicant's ability to finance contributions by acquiring debt, first return to the "Phase 2 Analysis" screen (i.e., Exhibit 3-23). Click the circle next to the "Ability to Pay Scenario 2: Loans from Commercial Lenders" row and then click the "View" button. Following the same format as the previous two screens, the top section of this screen (see Exhibit 3-27) compares the applicant's borrowing capabilities with the contribution sought by EPA. The middle section presents the model's conclusion regarding the applicant's ability to pay a penalty or contribution by borrowing money. Finally, the bottom section provides a summary of the impacts the additional debt will have on the applicant's financial condition. Note that this result is independent of the results in Scenario 1. The results of the two scenarios cannot be added together. Also, if the model concludes that the applicant can afford a contribution by borrowing money, but indicates that such a contribution would cause the applicant's available cash flow to become negative (or if cash flow was already negative), the user may want to make the conservative assumption that the applicant can only afford to pay the smaller of the amounts indicated in Scenarios 1 and 2. In such cases, although the applicant has not reached the debt "ceiling" of 36 percent of income, the applicant would be unable to make payments from cash flow if he or she were to take out a loan, and therefore cannot really afford such a loan. Chapter 4 contains a complete discussion of the methods the model applies in determining its ability to pay conclusion. Appendix A contains the mathematical equations used by the model. Within the model, you may click the "Help" button to access additional information about this screen. If you wish to print the results, click the "Print" button. To return to the "Phase 2 Analysis" home screen, click the "Return" button.

Exhibit 3-27

"Ability To Pay Scenario 2: Loans from Commercial Lenders" Screen

<<<GRAPHIC NOT AVAILABLE>>>

Completing the Phase 2 Analysis

When you finish reviewing your analysis, click the "Exit Phase 2 Analysis" button contained in the "Phase 2 Analysis" screen (i.e., Exhibit 3-23) to return to the "Main" screen (i.e., Exhibit 3-2). You may now begin a new ability to pay analysis or exit the program entirely by clicking the "Exit" button.

In some cases the ability-to-pay conclusions in Scenarios 1 and 2 may differ; that is, the model indicates that the applicant can afford a higher payment or contribution in one scenario than in the other. See Section A of Chapter 4 of this User's Manual for guidance on determining the applicant's ability to pay in this situation.

E.   MODIFYING MODEL RUNS AND EXPORTING CASES

After completing the Phase 1 and Phase 2 analyses, you can either end the session or conduct a second calculation of the applicant's ability to pay using different input variables. This section outlines the procedure for changing data inputs and the model's default values after you complete your initial run.

1.   Modifying Data Inputs and Default Values

Two different kinds of input can be changed in Phases 1 and 2 of the model: a) data entered from the applicant's tax form and/or from the individual financial data request form, and b) the default values the model uses to analyze the applicant's financial data. Changing either of these types of values is simple within the Individual Ability to Pay Model's format, as follows:

- From the "Main" screen (i.e., Exhibit 3-2), initially select the particular case you would like to modify (i.e., Fred Flashy).

- Click the "Edit" button to bring up the "Case Description Details" screen (i.e., Exhibit 3-3). At a minimum, change the "Run Description" located at the base of the screen so it describes the particular modification(s) of your new run. Also, make any other changes you would like reflected on this screen in the new run, such as the number of household members or number of years of tax information.

- If you want to change data input in Phase 1 or Phase 2, click the appropriate "Input" button for either phase. Then, within these input screens find the data you want to change by clicking the "View/Edit" button for the appropriate screen. Note that you do not have to scroll through data you have already entered; for example, if you need to review the oldest year of tax data, you do not have to first examine the more recent years of data. Instead, you can select the specific year of data you need to edit in the tax data screen.

- After altering your data, you must re-run the Phase 2 analysis to view the results of your changes on the applicant's financial status and ability to pay.

If you want to change the model's default values, select the model's "Default Rates of Return" screen from the "Phase 2 Data Input Screen Selection" screen (i.e., Exhibit 3-9) and click the "View/Edit" button. The "Model Default Values" screen (i.e., Exhibit 3-11) will come up, allowing you to change the default values.

When you are finished, click the "Continue" button to save the new values and move to the next screen. Now the model will use the newly input values to re-calculate the applicant's ability to fund a contribution. To view the new results, re-run the Phase 2 analysis by clicking the "Run Phase 2" button on the "Main" screen.

2. __Multiple Analyses of an Applicant__

Under some circumstances, you may wish to examine the sensitivity of the model's results to changes in particular data inputs or default values. If an applicant, for example, projects that his or her income will be significantly different in the future than in the recent past (as reflected on the federal income tax forms), you may want to see how much the model's results change when this new income information is used.

To conduct multiple (sometimes termed "sensitivity") analyses of the same applicant using the Individual Ability to Pay Model, you can copy the initial case file for the applicant. This copy contains all of the case's original data inputs and default values. You can then rename and modify the case for the sensitivity analysis. The steps to do so are as follows:

- • Go to the "Main" screen of the model (i.e., Exhibit 3-2).

- • Select the existing case for which you would like to conduct a "sensitivity" analysis. For example, select the "Fred Flashy" case shown in Exhibit 3-2.

- • Click the "Copy" button. This selection will trigger a message stating "STOP Are you sure that you want to create a duplicate case Fred Flashy?" Click "Yes." The model will then issue a message stating "The new case will be titled Fred Flashy_NEW." Click "OK" and the new case will appear on the screen.

- • At this stage, you may wish to alter the case name, "Fred Flashy_NEW." To do so, click "Fred Flashy_NEW" to select this case. Then click the "Edit" button to pull up the "Case Description Details" screen (i.e., Exhibit 3-3). You may then alter the name (e.g., changing it to "Flashy.v02" to indicate that it is version 2 of the Flashy case). You may also wish to delete the "__NEW" from the case name and change the run description so that you have two cases with the same applicant name but unique descriptions.

- Follow the instructions above in Section D.1 to then change a particular input or model default parameter.

- If you plan to run a large number of "sensitivity" analyses for a particular case, you should create and use a separate output directory (as specified in the "Welcome" screen shown in Exhibit 3-1) to store the case files for that applicant.

3.   Exporting Cases

You may wish to transfer a particular case file to another analyst so that he or she can further evaluate the case without re-entering all of the data, or transfer a group of cases concerning one applicant to a separate directory designated for that applicant. The steps to do so are as follows:

- Go to the "Main" screen of the model (i.e., Exhibit 3-2).

- Click the "Export" button to pull up the "Select Cases for Export" screen, as shown in Exhibit 3-28. Then select the case or cases you wish to export by clicking their names (or clicking the "All" button to select all of them).

- Specify the export "Destination Directory." The model automatically displays the directory you initially specified when you entered the program in the "Welcome" screen (i.e., Exhibit 3-1). *You must specify a different directory to which you will export the cases than the one you are currently using.* For example, if you want to export the cases to a floppy disk, specify either the a:\ or the b:\ drive, as appropriate. Alternatively, if you want to export the case(s) to a new subdirectory within your current directory, select "New Subdirectory" by clicking the "Create New Subdirectory" option. You may then enter the name of the new subdirectory (e.g., Export) that you wish to create.

• After you have entered the appropriate directory destination and highlighted the cases you wish to export, click the "Export" button. A message will appear stating "Exporting cases to [destination directory selected]. Continue?" Click the "Yes" button. A message affirming that your cases have been transferred will now appear. Click the "OK" button.

After exporting the case files, you must click the "Close" button in order to return to the "Main" screen. Note that when you examine the contents of the destination directory to which the case(s) were exported, it contains the IAPCASES.MDB file storing the cases.

To access the exported cases in the destination directory, the user must specify the destination directory as the output directory in the "Welcome" screen of the model. If the analyst wishes to transfer these cases again, into another directory, he or she may use the procedure noted above to export the case file again. Alternatively, the analyst can copy the case file "IAPCASES.MDB" to a different directory using the Windows™ File Manager.

Exhibit 3-28
"Select Cases for Export" Screen
<<<GRAPHIC NOT AVAILABLE>>>

Phase 2 of the Individual Ability to Pay Model presents a comprehensive summary of the applicant's financial status and quantifies the applicant's ability to pay a penalty or contribution. This chapter describes the Individual Ability to Pay Model's Phase 2 output. Section A provides an overview of the model output. Section B discusses the model's summary of the applicant's finances. Section C presents a detailed discussion of the two scenarios calculated by the model to estimate whether the applicant can afford to pay a penalty or contribution. Section D explains the meaning of the "flags" that may be generated by the model, which warn of inconsistencies in the underlying financial information provided by the applicant and/or unusual elements in the applicant's finances. Finally, Section E discusses the model's default values, explains their application, and describes instances that warrant adjustment.

A.   OVERVIEW OF THE PHASE 2 OUTPUT

The Phase 2 model output consists of three major sections. The first section provides a snapshot view of the applicant's finances. It summarizes the income information reported by the applicant on his or her federal tax forms, as well as the information about the applicant's living expenses, assets, and liabilities taken from the financial data request form.

The second section of the model evaluates the applicant's ability to pay the penalty or contribution sought by EPA. In this section, the model does not provide a single answer about an individual's ability to pay. Instead, the model assesses the two fundamental methods by which an applicant could fund a contribution -- cash flow and a loan from a commercial lending institution. Both of these scenarios compare the maximum contribution the individual can make with the penalty sought by EPA. If this maximum contribution exceeds the penalty amount, the model concludes that the individual can afford to pay. If this maximum contribution is positive but less than the penalty amount, the model presents this amount as the partial payment the individual can afford through the

particular funding approach. (Additionally, if you enter zero as the penalty amount sought by EPA, the model will report the maximum contribution the individual can make). If the applicant's maximum contribution is zero or negative, then the model concludes that the applicant can afford no penalty payment through the particular funding scenario. For example, in the cash flow scenario, if the applicant's expenses exceed income so that available cash flow is negative, the model concludes that the applicant cannot afford to fund a contribution through cash flow. Similarly, in the loan scenario, if the applicant's loans already equal at least 36 percent of income, the model concludes that the applicant cannot afford to fund a contribution through taking out a loan.

In some cases, the ability-to-pay conclusions in Scenarios 1 and 2 may differ — that is, the model indicates that the applicant can afford a higher payment or contribution in one of the scenarios than in the other. In such cases, we recommend that you make the conservative assumption that the applicant can only afford the smaller of the two amounts. By requesting only the smaller amount, the user guards against the possibility of causing the applicant undue financial hardship.

The third section of the Phase 2 output generates "flags" warning of either inconsistencies in the applicant's underlying financial information or unusual or complex features of the applicant's finances. The model performs internal checks of the accuracy and consistency in the information furnished by the applicant. If, for example, the applicant has taken a home mortgage interest deduction on his or her taxes but fails to claim any value for a personal residence on the financial data request form, the model will issue a flag alerting you to this discrepancy. These flags are issued only if inconsistencies or unusual features are present for a particular applicant. When these flags arise, you may need to either consult a financial expert or collect additional information from the applicant.

B.   APPLICANT'S FINANCIAL STATUS

The first five to six pages of the model's output summarize the applicant's financial status. The Phase 2 Tax Form Data Summary on Page 1 (or Pages 1 and 2, for applicants who are "married filing separately") shows the income information reported on the federal tax forms that is used within the Phase 2 analysis. As the sample output shows in Exhibit 4-1, the applicant (Fred Flashy) filed a

federal tax form 1040 for the years 1993 through 1995. He shows income from wages, tax-exempt interest, capital gains, other, partnership or S corporation, and estate or trust sources.

The next page, the Net Worth Summary, summarizes the financial information provided by the applicant on the financial data request form about his or her assets (e.g., bank accounts, investments, real estate), liabilities (e.g., mortgages, credit card debt), and living expenses. As can be seen in Exhibit 4-2, Mr. Flashy reports total assets of $135,000, total liabilities of $163,000, annual debt payments of $20,340, and annual living expenses of $53,400.

The Summary of Living Expenses on the next page details the applicant's current living expenses, including any debt payments the applicant funds. As Exhibit 4-3 shows, Mr. Flashy has numerous living expenses, including home maintenance, utilities, and various forms of insurance, as well as mortgages and other debt and tax payments.

The following page, the Summary of Applicant's Income Sources, categorizes the applicant's income and displays this information in both dollar (top half of page) and percentage (bottom half of page) terms. In the sample output presented in Exhibit 4-4, Mr. Flashy's income has progressively decreased from a high of $102,500 in 1993 to $62,500 in the most recent year (1995). Averaged over the three years, his income has been approximately $74,500 per year. Most of his income comes from wages and salaries (an average of 61 percent). However, his income from business sources has also been significant (averaging about 22 percent), although declining steadily between 1993 and 1995. The note at the bottom of the page warns that his total income varies significantly over this period; the user may want to consult the help system or the User's Manual to determine whether to change the smoothing constant, which will change the weights given to each year's income.

The next page, the Applicant's Rated Financial Status, presents an overall snapshot view of the applicant's financial status. As shown in Exhibit 4-5, the applicant's total average cash income is presented and compared to the median household income for the applicant's county of residence and household size. In the example, Mr. Flashy's average income is 171.2 percent of the median household income in his county (Cook County, Illinois) and adjusted for his household size of two.

Next, the applicant's average income is compared with his or her living expenses, as detailed in the financial data request form on page 4. The available cash flow is computed by subtracting living expenses and a contingency allowance from average total income. The contingency allowance represents a safety margin to cover unforeseen expenses. As explained in detail in Appendix A of this manual, the contingency allowance ranges between 5 and 15 percent according to the applicant's income relative to the median (i.e., a smaller contingency is accorded to higher income applicants). As shown in Exhibit 4-5, Mr. Flashy has cash flow of $18,416 per year over and above his household expenses and contingency allowance. This is Mr. Flashy's available cash flow.

This page also summarizes the applicant's net worth by first totalling the market values of all assets described in the applicant's financial data request form. Net worth is calculated by subtracting the applicant's total liabilities from these assets. Appendix A describes the calculation in detail. As Exhibit 4-5 shows, Mr. Flashy has negative net worth of ($28,000).

Finally, this page summarizes the average proportion of the applicant's cash income allocated for debt payments. In the example, shown in Exhibit 4-5, Mr. Flashy pays $20,340 per year in debt payments, which represents 27.3 percent of his average income.

Exhibit 4-1

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 4-2

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 4-3

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 4-4

<<<GRAPHIC NOT AVAILABLE>>>

Exhibit 4-5

<<<GRAPHIC NOT AVAILABLE>>>

C.   ABILITY TO PAY SCENARIOS

The two fundamental ways an applicant can fund a penalty or environmental cleanup contribution -- through excess cash income or taking out a loan -- are analyzed and presented on the following pages of the model's output. Each scenario represents a different approach that an individual could take to finance a payment. Thus, the results of the two scenarios are independent and <u>cannot</u> be added together.

An applicant may be able to afford the penalty or contribution sought by EPA through one scenario but not through the other. For example, the applicant may have sufficient available cash flow but too many debts to finance a penalty or contribution. The answers from each ability to pay scenario will differ under these circumstances, reflecting the differences between individuals' personal finances. In these cases, we recommend you make the conservative assumption that the applicant can only afford the smaller of the two amounts. By using the lesser amount, the user guards against causing the applicant undue financial hardship.

1.   <u>Scenario 1 — Available Cash Flow</u>

Individuals can pay a penalty or contribution with cash income they have left over after paying for living expenses. Scenario 1 of the model calculates an individual's annual after-tax cash income, deducts his or her living expenses, and further deducts a contingency allowance to provide a margin of safety against emergencies and unforeseen expenses. Any income remaining after these deductions is defined as "**available cash flow**" and is regarded as cash available to fund a penalty or contribution. Consistent with the ABEL model used to examine corporations' ability to pay, the Individual Ability to Pay Model assumes that five years of an applicant's available cash flow can be used to support a penalty payment. The model computes the present value of five years of available cash flow using the short-term consumer loan rate as the discount rate.[15]

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[15] This value is the same as the amount of a five-year loan that an applicant could support with available cash flow. Note that although the lump-sum payment is described as the five-year loan an applicant can support using only cash flow, in fact the applicant can choose any funding method he or she finds appropriate, including selling assets, liquidating bank accounts, reducing living expenses, or taking out a loan.

As shown in Exhibit 4-6, the top half of the Scenario 1 output first reiterates the contribution sought by EPA. The next figure presented, "Cash Flow to Fund Contribution," equals the minimum of a) the applicant's total available cash flow and b) the amount of the applicant's cash flow needed to fund the contribution sought by EPA. If the applicant has positive available cash flow, but it is insufficient to fund the full amount of the penalty or contribution sought by EPA, then this figure will equal the total amount of the applicant's annual available cash flow. If, however, the applicant has more than enough cash flow to fund the contribution, the model will display only the annual amount needed to generate payment of the contribution. As shown in the example in Exhibit 4-5, Mr. Flashy's total annual available cash flow is $18,416. The figure reported in Exhibit 4-6 as available cash flow is $15,292 -- the annual amount computed by the model over five years as necessary to generate a lump-sum payment to EPA of $50,000.

The third figure presented is the "Loan rate for a 5 Year Unsecured Loan." This figure is used as the discount rate by the model in computing the present value of five years of available cash flow. This rate is the most recent 24-month loan rate charged by commercial lending institutions (as reported in Table 1.56 of the *Federal Reserve Bulletin)*. As such, it serves as a proxy for the applicant's opportunity cost of capital.

The fourth figure presented is the "Present Value of 5 Years' Cash Flow". This figure represents the lower amount of a) the maximum contribution the applicant can fund through available cash flow and b) the contribution sought by EPA (plus a contingency margin). If the applicant cannot afford to pay the full amount of the contribution sought by EPA using available cash flow, then this figure will equal the present value of 5 years of the applicant's available cash flow. If, however, the applicant can afford to pay the full amount through available cash flow, then this figure will equal the contribution sought by EPA plus a contingency (explained below).

The next figure presented, "Contingency Allowance" computes the increase in the applicant's contingency allowance associated with the penalty or contribution. Because the contribution represents a new expense for the applicant, the overall contingency allowance must be adjusted accordingly. The final figure in the top half of the page, entitled "Contribution Individual can Pay to

EPA (Present Value of Cash Flow Adjusted for Allowance)" is the present value of five year's cash flow minus the additional contingency allowance. It represents the total contribution that the applicant can fund from available cash flow. Note that if the applicant's available cash flow can support a payment that exceeds the contribution sought by EPA, the maximum amount the model reports is the contribution sought by EPA.

The middle section of the page entitled "Conclusion" compares the contribution amount that the model calculates could be supported with the applicant's available cash flow (i.e., "Present Value of Cash Flow Adjusted for Allowance") with the penalty or contribution sought by EPA. The conclusion will state either:

- **The applicant can pay the proposed contribution from cash flow.**
  This message is triggered when the maximum contribution the applicant can support with available cash flow exceeds the penalty or contribution amount.

- **The applicant can only pay $____ of the proposed $____ from cash flow.**
  This message is triggered when the applicant has positive available cash flow but it is insufficient to fund the entire penalty or contribution sought by EPA.

- **The model is unable to calculate a contribution from cash flow because the applicant's current living expenses exceed income. The applicant cannot fund a contribution using cash flows.**
  This message is triggered when the applicant's available cash flow is either zero or negative (i.e., expenses exceed income).

- **The user has not entered a proposed contribution. The applicant can pay a maximum contribution of $____ from cash flow.**
  This message appears when you do not enter a value (or you enter a value of zero) for the contribution sought by EPA in the initial "Case Description Details" screen (see Exhibit 3-3). The model calculates the maximum payment the applicant can afford using available cash flow.

Exhibit 4-6

The bottom portion of the page (Exhibit 4-6) presents the model's estimates of the impact on the applicant's financial status of the contribution the applicant can afford with available cash flow. The "Before" and "After" figures trace this impact. The "Before" figures reiterate the applicant's current financial status. The "After" figures are adjusted for the impact of a penalty or contribution made with the applicant's available cash flow, as follows:

- **Total Living Expenses** If the contribution that can be funded from available cash flow is positive, living expenses will increase. In Exhibit 4-6, the applicant's living expenses will increase by the annual payments and associated contingency needed over a five year period to pay the penalty or contribution sought by EPA.

- **Available Cash Flow** The applicant's available cash flow will decrease by the amount needed to fund the penalty or contribution sought by EPA. If all of the applicant's available cash flow is needed to fund a contribution, this figure will be zero.

- **Total Liabilities** Because this funding scenario assumes that five years of the applicant's available cash flow is available to fund a penalty or contribution, this payment represents a new liability for the applicant. Accordingly, total liabilities increase by the amount of the contribution which the applicant can afford.

- **Net Worth** The value of the applicant's net worth after liabilities have been re-computed is adjusted downward to reflect the contribution and the corresponding increase in the applicant's total liabilities.

- **Total Annual Debt Payments** The applicant's total annual debt payments will rise by the amount of the annual payments needed to fund the contribution.

- **Debt Payments as Percentage of Income** Computed as the applicant's annual debt payments divided by his or her total average income, this proportion will rise to reflect the contribution, as long as the applicant's current available cash flow is positive. Note that when this exceeds 36 percent of the applicant's income, the model's conclusion may be invalid. The user should contact a financial expert in such cases.

A complete description of the equations used in the Scenario 1 calculations is presented in Appendix A.

2.   Scenario 2 — Debt Capacity

The other means an individual can use to pay a penalty or environmental cleanup contribution is to take out a loan. Commercial lending institutions use a rule-of-thumb that individuals can support debt payments of up to 36 percent of their total income. Available debt capacity represents the difference between this 36 percent guideline and the applicant's current debt payment to income ratio. Individuals with positive debt capacity will probably be able to qualify for a loan from a commercial lender. Scenario 2 of the model examines whether an applicant's current debt payments are less than 36 percent of their total income. If so, the model regards the applicant as having positive debt capacity and, further, computes the amount of a five-year loan at the prevailing commercial lending rate for personal loans that would take the individual up to this 36 percent limit.

As shown in Exhibit 4-7, the top half of the page reiterates the following two values:

• Contribution sought by EPA
• Current debt payments

The next figure, "Additional Debt Payment" represents the amount of additional debt the applicant could theoretically take on, up to either the 36 percent threshold or the penalty or contribution sought by EPA, whichever is lowest. In the current example, Mr. Flashy presently pays approximately 27.3 percent of his annual average cash income of $74,486 in debt payments. If, instead, he took on additional debt up to the 36 percent threshold, he could afford to make additional annual loan payments calculated as:

$$(0.36 - 0.273) * \$74,486 \approx \$6,475$$

Exhibit 4-7

<<<GRAPHIC NOT AVAILABLE>>>

The next figure provided is the "5 Year Supportable Loan with Additional Debt Payment." If the value of this loan is less than the penalty or contribution sought by EPA, it is simply the value of a five-year loan that could be supported with the additional debt payment value. If this value is greater than the penalty or contribution sought by EPA, it will equal the contribution. Similarly, the "Additional Debt Payment" figure will equal only that annual amount needed to fund the contribution sought by EPA.

Note that the model's calculations assume that the applicant's current level of annual debt payments will remain constant for five years. If this presumption is not appropriate, the user should seek the assistance of a financial analyst.

The middle section of the page entitled "Conclusions" compares the applicant's supportable contribution from debt capacity with the penalty or contribution sought by EPA. The conclusion will state one of the following:

- **The applicant can pay the proposed contribution by obtaining additional loans.**
  This message is triggered when the maximum contribution the applicant can support with additional debt capacity exceeds the penalty or contribution amount

- **The applicant can only pay $_____ of the proposed $_____ by obtaining additional loans.**
  This message is triggered when the applicant has additional debt capacity but it is insufficient to fund the entire penalty or contribution sought by EPA.

- **The model is unable to calculate a contribution using additional debt capacity because the applicant's current debt payments already exceed 36 percent of income. The applicant cannot fund a contribution by assuming additional debt.**
  This message is triggered when the applicant has no additional debt capacity (i.e., current debt payments exceed 36 percent of income).

- **The user has not entered a proposed contribution. The applicant can pay a maximum contribution of $____ by obtaining additional loans.**
  This message appears when you do not enter a value (or you enter a value of zero) for the contribution sought by EPA in the initial "Case Description Details" screen (see Exhibit 3-3). The model calculates the maximum payment the applicant can afford by obtaining additional loans.

The bottom portion of the page estimates the impact on the applicant's financial status of taking on additional debt. The "Before" and "After" figures trace this impact. The "Before" figures reiterate the applicant's current financial status. The "After" figures are adjusted for the impact of a contribution made with an applicant's additional debt capacity, as follows:

- **Total Living Expenses** If the applicant's additional debt capacity is positive, then the model assumes that the applicant can take out additional loans to fund a contribution. The additional loan payment increases the applicant's living expenses.

- **Available Cash Flow** The applicant's available cash flow will fall by an amount equal to the additional loan payment and contingency needed to fund a contribution. Note that when available cash flow becomes negative due to the increase in liabilities, the model's conclusion may be invalid. The user should contact a financial expert in such cases.

- **Total Liabilities** The applicant's total liabilities will increase with the new loan. This increase equals the amount of the penalty or contribution the applicant can afford.

- **Net Worth** The value of the applicant's net worth after liabilities have been re-computed is adjusted downward to reflect the increase in the applicant's total liabilities.

- **Total Annual Debt Payments** The applicant's total annual debt payments will rise by the amount of the annual payments needed to fund the contribution.

- **Debt Payments as Percentage of Income** Computed as the applicant's total average income divided by his or her annual debt payments, this proportion will rise if the applicant has positive debt capacity.

A complete description of the equations used in Scenario 2 is presented in Appendix A.

D.   FLAGS

The model executes a number of internal checks to verify the consistency of information provided by applicants in their federal income tax returns and financial data request forms. It also checks for financial anomalies. If an inconsistency or anomaly is found, the final section of the model's output will issue a "flag" alerting the user. Each of these flags is discussed in turn.

1.   Applicant's Filing Status

Flag: "The applicant's filing status is 'Married Filing Separate Return.' Verify that you have entered tax returns and financial data for both spouses. Consult a financial expert if you do not have this information."

This flag alerts you in cases in which the applicant is married but files a separate tax return from his or her spouse. You need to make sure that a) the applicant submits both his or her tax returns **and** his or her spouse's tax returns, and b) the information provided in the financial data request form reflects the joint finances of the applicant and his or her spouse.

A common strategy undertaken by individuals to avoid paying a penalty to EPA is to claim that their spouse's finances are irrelevant to their environmental liabilities. Some applicants go so far as to assert that their spouses own all of their assets (e.g., bank accounts, money market funds, real estate) but then also claim in their own name all of the liabilities (e.g., residential mortgages, loans). The legality of the spouse's responsibility for such assets and liabilities varies by state. EPA policy at the settlement stage of negotiations, however, is that an environmental liability is no different than any other type of liability. In general, individuals who are married contribute to the payment of

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expenses or liabilities incurred by their spouses. As a result, the total finances of an applicant and his or her spouse must be viewed as available for a penalty payment.

If you have additional questions about this position, please call Jonathan Libber at FTS 202/564-6011.

2.   Complex Income Sources

Flag: "Applicant income is reported from at least one of the following sources: rental, royalties, partnership, S Corporation, estate or trust, REMIC, farm, capital gains/losses, and other gains/losses. Consult a financial expert for assistance."

This flag is issued to alert you to the fact that part of the applicant's income comes from a complex source. It is often difficult to estimate the actual cash flow (or losses) generated from these sources without the assistance of a financial expert. Large losses, for example, from a partnership may reflect "paper" losses and not real out-of-pocket cash losses to an applicant. If a significant portion of the applicant's income, whether positive or negative, comes from one of these sources, you should seek the assistance of a financial expert.

3.   Under-Reported Income

Flag: "The income reported by the applicant on the Financial Data Request Form is more than 10 percent different from that which the applicant reported on his or her latest tax return.   Check with applicant."

The model conducts an internal check to compare the income reported by the applicant on the financial data request form with the total income computed from his or her latest tax form. If the absolute value of the difference between the applicant's self-reported income from his or her financial data request form and that reported on the most recent tax form equals more than 10 percent of the income from the tax return, this flag is issued.

A number of plausible reasons may exist to explain such a difference. The applicant's tax return reflects last year's income, whereas his or her current income may have changed since that time. Because the model uses the applicant's federal income tax forms in calculating the applicant's ability to pay, determining the cause of this discrepancy is important, particularly if the applicant's income has dropped since they last filed a tax return. You should ask the applicant for more information if this flag appears.

4.   Under-Reported Market Value of Interest-Bearing Assets

Flag: "The applicant may have under-reported the market value of some or all interest and dividend bearing assets. Ask the applicant for documentation of the market valuations."

The model conducts an internal check to compare the value of the interest- and dividend-bearing assets claimed on the individual financial data request form with the interest and dividend income claimed on the latest tax return. To do so, the model conservatively estimates the value of the applicant's interest- and dividend-bearing assets by dividing the income reported on his or her most recent tax return by 10 percent. This estimate is conservative because 10 percent is a relatively high return for these types of assets -- and the higher the return used as a divisor, the smaller the estimated value. This estimated value is then compared with the information furnished by the applicant on their financial data request form. If the self-reported value of these assets (from the financial data request form) is less than the estimated value (based on tax return data), then this flag is issued.

If this flag appears, you should ask the applicant for documentation of the market value of interest and dividend-bearing assets and use this additional information as the basis for subsequent model runs.

5.   Inconsistent Home Mortgage Deduction

Flag: "The applicant claimed a mortgage deduction in [year], but did not list home residential property on the Financial Data Request Form. Follow-up with applicant."

The model checks whether a mortgage deduction was taken by the applicant on his or her tax return. If so, it then checks to insure that the applicant also reports the value of a residence on their financial data request form. You should seek additional information from the applicant if this flag is issued in order to resolve this inconsistency.

6.   Under-Reported Market Value of Real Estate

Flag: "The applicant may have under-reported the market value of real estate holdings. Ask the applicant to provide documentation for the basis of the market valuation.

The model performs an internal audit of the market value of real estate self-reported by an applicant on his or her financial data request form. First, the model totals the real estate taxes claimed by the applicant in his or her federal income tax return for both his or her primary residence, vacation real estate, and rental real estate. Next, the model conservatively estimates the assessed value of this property by dividing the taxes paid by 10 percent. This step assumes that the locality of the property has a property tax rate of 10 percent -- far higher than nearly all property tax rates. Use of a such a high property tax rate is conservative because it is used as a divisor (i.e., the higher the rate, the lower the estimated property value).

If the estimated assessed value of the applicant's real estate exceeds the value claimed in the applicant's financial data request form, then the applicant has probably under-reported the value of this property by a significant amount. If this flag appears, you should ask the applicant for further documentation. If the applicant is unable to provide persuasive documentation, you should seek the assistance of a financial expert who can pursue other avenues of research to estimate the market value of an applicant's real estate holdings.

7.   Income Variation

Flag: "The applicant's total income varies significantly from year to year. Verify your data inputs."

This flag warns you of instances in which the applicant has a high degree of variation in total income. If this flag appears, you should first check your data inputs to make sure that you did not incorrectly enter this data into the model.

If your data inputs are correct, you may want to consider altering the smoothing constant. Modifying the smoothing constant changes the weights used to estimate the applicant's average total income. Change the smoothing constant only if you think a different weighting scheme will provide a more accurate picture of the applicant's future earnings potential. (See Section E below or Appendix A for a detailed description).

8. <u>Negative Net Worth</u>

Flag: "Prior to calculating a contribution, the applicant's liabilities exceeded assets. The potential contribution calculated in Scenarios 1 and 2 may exacerbate this problem. This is not recommended; carefully examine the impact of potential contributions on the applicant's financial condition."

This flag warns you of cases in which the applicant claims higher liabilities than assets. Clearly, the applicant should not be able to continue for long in this situation, and may have to use cash flows or new loans to make payments on current debt. Therefore, the applicant may not actually be able to make the contribution estimated in the ability to pay scenarios. You should consult a financial analyst in this situation.

9. <u>Liabilities Exceed Assets with Contribution from Cash Flow</u>

Flag: "The applicant's liabilities will exceed assets if the contribution is financed using cash flow. This is not recommended; carefully examine the impacts of using cash flow to support the contribution."

This flag is triggered when an applicant has available cash flow to pay a penalty; however, committing five years of cash flow in this manner would result in the applicant's liabilities rising above his or her assets. Since having liabilities higher than one's assets results in an unstable financial situation, you should examine these impacts carefully. You should obtain the assistance of a financial expert if funding a contribution through cash flow is the only approach the model determines is viable for an applicant.

10. Excessive Debt Payments with Contribution from Cash Flow

Flag: "The applicant's debt payments will exceed 36 percent of income if the contribution is financed using cash flow. This is not recommended; carefully examine the impact of using cash flow to support the contribution."

This flag appears when an applicant has available cash flow to fund a penalty; however, committing five years worth of cash flow would result in the applicant exceeding the 36 percent threshold in debt payments. Although the 36 percent threshold should not be viewed as a rigid barrier, you should obtain the assistance of a financial expert if funding a contribution through cash flow is the only approach the model determines is viable for an applicant.

11. Expenses Exceed Income with Additional Loans

Flag: "The applicant's expenses will exceed income if the contribution is financed with loans. This is not recommended; carefully examine the impact of additional loans on the applicant's financial condition."

This flag arises when an applicant can afford to make a contribution by taking on additional loans; however, in doing so, the applicant's expenses rise to a new level that exceeds his or her income. You should carefully evaluate the applicant's claimed living expenses to determine whether they are inflated. If obtaining additional loans is the only approach that the model determines is available to fund a contribution, you should seek the assistance of a financial expert.

12.   <u>**Liabilities Exceed Assets with Additional Loans**</u>

Flag: "The applicant's liabilities will exceed assets if the contribution is financed with loans. This is not recommended; carefully examine the impact of additional loans on the applicant's financial condition."

This flag warns of a situation in which the applicant can obtain additional loans but in doing so, the additional liabilities from the new loans will cause his or her liabilities to exceed assets. This situation is unusual since, in most cases, such an applicant will currently have significant liabilities with associated debt payments representing more than 36 percent of their income. However, this scenario may occur when the contribution sought by EPA is particularly high.

You should seek the assistance of a financial expert if the model determines that the only way an applicant can fund a contribution is by obtaining additional loans.

13.   <u>**Excessive Annual Debt Payments**</u>

Flag: "The annual debt payments claimed as part of the applicant's living expenses on the Financial Data Request Form are far higher than we expect given the liabilities (e.g., loans) claimed by the applicant. Ask the applicant for further documentation.

This flag appears when the applicant's claimed annual debt payments are greater than could reasonably be expected from their total liabilities. Specifically, if the applicant's annual debt payments are greater than 30 percent of total liabilities, the flag will appear, warning the user of this inconsistency.

14.   <u>**Potential Financial Issues**</u>

Flag: "The applicant's financial condition is expected to change during the next year."

Flag: "The applicant is currently in the process of buying or selling real estate."

Flag: "Another person or institution is holding real estate or personal property on the applicant's behalf (e.g., trust)."

Flag: "The applicant is a party in a pending lawsuit."

Flag: "The applicant has had belongings repossessed within the last three years."

Flag: "The applicant is a Trustee, Executor, or Administrator."

Flag: "The applicant is a participant or beneficiary of an estate or profit sharing plan."

Flag: "The applicant has declared bankruptcy within the last seven years."

Flag: "The applicant receives federal aid or public assistance."

The flags listed above are derived from page 10 of the applicant's financial data request form. These flags will appear if the applicant checked any of the boxes provided on page 10 of the form. Any of the above conditions may affect the applicant's future income. The financial data request form asks that the applicant provide a written explanation of these conditions. You should first read this explanation. Next, if you are persuaded that the applicant's financial condition may change, you should seek the assistance of a financial expert since additional model runs based on the applicant's *projected* financial status may be needed.

Returning to the example, shown in Exhibit 4-8, Mr. Flashy's finances trigger a number of flags. The first flag that appears warns that some of Mr. Flashy's income is derived from business sources that may not accurately reflect the cash flow he actually received from these sources. Indeed, Exhibit 4-1 shows that a significant portion of Mr. Flashy's income has come from business sources. Most recently, he recorded a income loss of $2,000 in 1995 from an estate or trust that may have consisted of "paper", and not real, losses.

The third flag notes that Mr. Flashy claimed a mortgage deduction on his most recent tax return, but failed to list a value for his home on the financial data request form. The third flag reinforces this message by stating that Mr. Flashy may be under-reporting the value of his real estate. From Exhibit 4-2, you see that Mr. Flashy reported that he did not own any real estate on the financial data request form. However, Exhibit 4-1 shows that Mr. Flashy claimed to have paid $3,000 in real estate taxes on his 1995 federal income tax form. Although, Mr. Flashy may have recently sold his real estate holdings, more information should be obtained from Mr. Flashy. Even if he sold his real estate holdings, you should make sure that the proceeds from the sale are accurately reflected in the assets he claims on the Financial Data Request Form.

The fifth flag notes that Mr. Flashy's total income varies significantly over the years of tax return data supplied. Mr. Flashy's income has indeed dropped significantly, from over $100,000 in 1993 to just over $60,000 in 1995. In this case, the user may wish to raise or lower the smoothing constant depending on which years of income are more likely to predict Mr. Flashy's future cash flows. This procedure is explained in the next section.

From the sixth flag it is evident that Mr. Flashy has negative net worth, which may be aggravated by requiring a contribution from him. Again, previous flags warned that Mr. Flashy is either not claiming his home as an asset or may have recently sold it. In either case, it is highly likely that the individual financial data request form submitted by Mr. Flashy does not accurately portray his assets. The user should check with Mr. Flashy to resolve these questions.

Finally, the seventh flag warns us that if Mr. Flashy is required to pay the whole contribution with excess cash flows, his level of annual debt payment will exceed 36 percent, which is not recommended. Again, a closer examination of the effects of a contribution may be warranted here.

Exhibit 4-8

<<<GRAPHIC NOT AVAILABLE>>>

E.   CHANGING THE MODEL'S STANDARD VALUES

The Individual Ability to Pay Model gives you the opportunity to review and modify several assumptions, or "standard values" that are used in the Phase 2 analysis. However, you should not alter standard values unless you have a complete understanding of why they are inappropriate for your specific case.

The following standard values are used in the Individual Ability to Pay Model's Phase 2 analysis, and can be accessed by the user in the "Default Parameters" screen:

1.   Rate of return on interest-bearing assets;

2.   Interest rate on commercial loans; and

3.   Smoothing constant.

The first two standard values listed above, as well as the U.S. Department of Housing and Urban Development's Adjusted Income Limits used in Phase I of the model, are updated annually by EPA.

1.   Rate of Return

The rate of return on interest-bearing assets determines how much interest income certain assets should generate for the applicant. The model uses the interest rate, pre-set to 10 percent,[16] to check two values:

1.   Interest-bearing assets of the applicant; and

2.   Real estate held by the applicant.

To check whether the applicant is under-valuing interest-bearing assets on the financial data request form, the model divides the weighted average interest and dividend income from the applicant's tax returns by the default interest rate. The result is the applicant's minimum possible level of interest-bearing assets. Thus, in using a high value of 10 percent,[17] the model is conservative -- conservative because the higher the rate of return the model assumes, the lower the estimated minimum asset base must be to generate a given amount of interest/dividend income. If the level of interest-bearing assets on the applicant's financial data request form is less than the model's estimate, it issues a flag alerting the user to this suspicious situation.

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[16] Source: Ibbotsen Associates, *Stocks, Bonds, Bills, and Inflation: 1997 Yearbook*, Table 8.1.

[17] A rate of return of 10 percent is slightly higher than the Ibbotsen rates of return on stocks and bonds suggest for an applicant who maintains 40 percent of his or her investments in stocks and 60 percent in bonds. Since many applicants obtain investment income from retirement funds that invest cautiously, we assume that weighting bonds more heavily than stocks is reasonable.

To check whether the applicant is under-valuing real estate on the financial data request form, the model divides the real estate taxes from the applicant's tax returns by the default interest rate. The result is the applicant's minimum possible level of real estate. Again, the default level of 10 percent is conservative; if the applicant's declared real estate is valued below the model's estimate, the model issues a flag alerting the user.

You should change the rate of return on interest-bearing assets in the "Default Parameters" screen of Phase 2 only if you are certain that a higher or lower rate is generated by the assets of a particular applicant. Otherwise, the conservative 10 percent estimate is appropriate. Raising the rate of return will lower the estimated asset base of the applicant, thus making the test even more conservative. Lowering the rate of return will raise the asset base estimated by the model, and will make it more likely that the model will issue a flag that the applicant is under-valuing assets.

2.   Commercial Loan Rate

The commercial loan rate is the interest rate that an applicant would have to pay on a short-term loan taken out to fund a contribution from a commercial lender, such as a bank. In Scenario 1, this rate is used as a proxy for the individual's opportunity cost of capital to discount the applicant's available cash flow over five years into a present value figure. In Scenario 2, this rate is used as a proxy for the interest rate the applicant would pay is he or she took out a five-year loan from a commercial lender. Currently, the model uses a loan rate of 14 percent, which is based on the interest rate for 24-month personal loans cited in the most recent Federal Reserve Bulletin, Table 1.56. This is the closest available approximation to the rate for a five-year loan from a commercial lender. In general, 24-month loans are more expensive than five-year loans, so using the interest rate on a typical 24-month loan gives a conservative ability to pay estimate.

You should change the commercial loan rate in the "Default Parameters" screen of Phase 2 only if you are certain that a higher or lower rate will be necessary for the applicant, or if you have current, more accurate information about the interest rate for personal loans than the model does. Raising the commercial loan rate will lower the estimate of the applicant's ability to fund a

contribution, because it makes borrowing more expensive for the applicant. Conversely, lowering the commercial loan rate raises the applicant's ability to pay.

3.   Smoothing Constant

The smoothing constant is used to calculate the weighted average of the applicant's income. Like the ABEL model developed to calculate the ability to pay of corporations, the Individual Ability to Pay Model uses a smoothing constant of 0.3 to determine the weights of each year of income for its calculations. The default value of the smoothing constant is set to 0.3 to weight the most recent year's income most heavily. The equation in which the smoothing constant is used is discussed in detail in Appendix A, where the specific weights determined by the smoothing constant are displayed in Exhibit A-2.

The smoothing constant assumes that the most recent year of income is the most accurate predictor of the applicant's future earnings potential. You should not adjust the smoothing constant, therefore, unless a) the model issues flags alerting the user to large variation in total income and a change is warranted, or b) you have other information (such as a written explanation provided by the applicant in connection with page 10 of the financial data request form) informing you that the most recent federal tax form is not a good proxy for the applicant's future income. In that case, you must decide whether to adjust the smoothing constant, based upon whether you think the year of income causing a large variation is a more accurate predictor than the other years.

Raising the smoothing constant weights the most recent year of income more heavily; lowering it lowers the weight given to the most recent year's income, simultaneously raising the weights given to the other years. You should consult Appendix A, Exhibit A-3 to determine the precise effects a change to the default smoothing constant will have on the income weights.

If, for example, the applicant's most recent year of income is significantly higher than the average, and you believe that year is a much better estimate of future cash flow than the other years, you may wish to increase the smoothing constant, in which case you will need to re-run the Phase 2 analysis so the model can make all relevant re-calculations and produce new values for weighted

average income. However, if the most recent year is significantly larger than the average and you believe that this is due to an aberration in income, which will not continue in the future, you may wish to lower the smoothing constant, thereby decreasing the weight of this year's income in the calculation of total average income (and income from each source).

If you intend to change the value of one of the default values, but wish to retain the analysis that the model has already performed with the default values, you may do so easily. In the case using the pre-set default values, click the "Copy" button in the main screen of the model. The model will ask if copying the file under the old name with "_NEW" attached to it is OK. When you click "OK," the case is copied. You can then save it with a different name, if desired, by changing the applicant name in the "Case Description Details" screen. Alternatively, you can retain the original case name and enter a different run description. Then you may proceed directly to Phase 2 Input to change the standard values in the "Default Parameters" screen. You must then re-run the Phase 2 analysis so the model can re-calculate the applicant's ability to pay based on the new values. The case analysis with the pre-set default values will still exist.

	Exhibit 4-9	
	IMPACT OF CHANGES OF STANDARD VALUES	
Variable	**Direction of Change**	**Impact on Ability to Pay**
Rate of Return on Assets	Increase	None; makes test for value of assets more conservative
	Decrease	None; makes test for value of assets less conservative
Commercial Loan Rate	Increase	Decrease level of funding available from cash flow and loans
	Decrease	Increase level of funding available from cash flow and loans
Smoothing Constant	Increase	Increases the weight given to the most recent year's income.
	Decrease	Decreases the weight given to the most recent year's income. Impact on the applicant's ability to pay is indeterminate; depends on applicant's specific income figures.

METHODOLOGY FOR COMPUTING THE

INDIVIDUAL'S ABILITY TO PAY   **APPENDIX A**

A.   INTRODUCTION

This technical appendix explains the methodology used in the Individual Ability to Pay Model to calculate an individual's or sole proprietorship's ability to fund a contribution toward the cleanup of a Superfund site or pay a penalty for environmental damage. The primary purpose of the appendix is to present the mathematical formulae used in the Individual Ability to Pay Model.

The Individual Ability to Pay Model calculates the ability to pay of an applicant in several stages. First, the model performs a preliminary screening analysis of the applicant's finances in which the model determines whether the applicant could possibly fund any contribution or make any amount of penalty payment. If the model determines that the applicant is a possible source of funds, it instructs the user to conduct a more extensive analysis of the applicant's ability to pay. Once this is complete, the model presents its conclusions regarding both the current financial position of the applicant and the effects a penalty or contribution would have on the applicant's finances. The model investigates two methods by which the applicant could fund a penalty or contribution: cash flow and commercial loans. It also estimates the effects of each payment method on the applicant's income, living expenses, assets, liabilities, and annual debt payments.

B.   DERIVATION OF MATHEMATICAL FORMULAE

This section describes the mathematical procedures for calculating ability to pay. The explanation is fairly detailed, including the algorithms used in the Individual Ability to Pay Model. The variables and symbols used in these algorithms are listed and defined in Exhibit A-1. This section outlines the calculations used in each of the model's financial analyses of the applicant -- both the

analyses concerning the applicant's current financial position and those concerning the applicant's ability to fund a penalty or contribution through cash flow and commercial loans. The outline proceeds in the same order as the model's printouts, and addresses the model's calculations as they relate to the following topics:

- Phase 1 Output

- Summary of Applicant's Income Sources

- Applicant's Rated Financial Status

- Two Ability to Pay Scenarios

<table>
<tr><td colspan="2" align="center">**Exhibit A-1**</td></tr>
<tr><td colspan="2" align="center">**NOTATION FOR THE INDIVIDUAL ABILITY TO PAY MODEL**</td></tr>
<tr><td>AAGI</td><td>Average Adjusted Gross Income ($)</td></tr>
<tr><td>ACF</td><td>Available Cash Flow ($)</td></tr>
<tr><td>ADP</td><td>Additional Debt Payments ($)</td></tr>
<tr><td>AGI</td><td>Adjusted Gross Income ($)</td></tr>
<tr><td>CFFC</td><td>Cash Flow to Fund Contribution ($)</td></tr>
<tr><td>CLIVEXP</td><td>Claimed Living Expenses ($)</td></tr>
<tr><td>ALLOW</td><td>Cash Flow Contingency Allowance ($)</td></tr>
<tr><td>CONT</td><td>Cash Flow Contingency (%)</td></tr>
<tr><td>DPPI</td><td>Debt Payments as a Percentage of Income (%)</td></tr>
<tr><td>FUNDS</td><td>Amount Needed to Fund Entire Contribution ($)</td></tr>
<tr><td>LOAN</td><td>Five Year Supportable Loan with Additional Debt Payment ($)</td></tr>
<tr><td>MHI</td><td>Median Household Income ($)</td></tr>
<tr><td>n</td><td>Number of Years</td></tr>
<tr><td>NW</td><td>Net Worth ($)</td></tr>
<tr><td>PMT</td><td>Contribution Individual Can Pay to EPA ($)</td></tr>
<tr><td>PVCF</td><td>Present Value of Cash Flow ($)</td></tr>
<tr><td>r</td><td>Interest Rate on Loans (%)</td></tr>
<tr><td>smooth</td><td>Smoothing Constant</td></tr>
<tr><td>s_{xi}</td><td>Standard Error</td></tr>
<tr><td>$t_{\alpha/2}$</td><td>= 1.886; Value for T-distribution, assuming 2-tailed test, 80 percent significance level, and 2 degrees of freedom</td></tr>
<tr><td>TA</td><td>Total Assets ($)</td></tr>
<tr><td>TAI</td><td>Total Average Income ($)</td></tr>
<tr><td>TADP</td><td>Total Annual Debt Payments ($)</td></tr>
<tr><td>TI_i</td><td>Total Income in year i ($)</td></tr>
<tr><td>TL</td><td>Total Liabilities ($)</td></tr>
<tr><td>TLIVEXP</td><td>Total Living Expenses ($)</td></tr>
<tr><td>$x_{i,j}$</td><td>Income in Year i from Source j ($)</td></tr>
<tr><td>$\overline{x}$</td><td>Unweighted Average Income ($)</td></tr>
<tr><td>$weight_i$</td><td>Income Weight for Year i Determined by Smoothing Constant</td></tr>
</table>

Note: Within the appendix the subscripts *a* and *b* may be attached to the variables listed above. Subscript *a* pertains to the "after" case (i.e., the applicant's financial position after funding a penalty or contribution); subscript *b* pertains to the "before" case.

1.   Phase 1 -- Income Comparison

In Phase 1, the model calculates the average adjusted gross income of the applicant from the tax information supplied by the user; it then compares this income level to the low income level for the county of residence and household size of the applicant. If the applicant's income is above the low-income level (or any flags concerning the applicant's information are issued,) the model prompts the user for a Phase 2 analysis.

In order to calculate the average adjusted gross income (AAGI) for the applicant, the model weights the applicant's adjusted gross income (AGI) for each of the years for which it is available according to the smoothing constant, which is pre-set to 0.3. By using a smoothing constant, the model assumes that the most recent year's income provides the best indication of the applicant's current financial position. This same assumption is applied in the corporate ability to pay model (ABEL) for income analysis. The calculations proceed as follows:

$$AAGI = \sum_{i=1}^{n} (AGI_i * weight_i)$$

$$where\ weight_i = \frac{[smooth * (1 - smooth)^{i-1}]}{\sum_{i=1}^{n} [smooth * (1 - smooth)^{i-1}]}$$

A.1

Inserting the default smoothing constant into the equation presented above generates the weights the model uses to calculate the applicant's average adjusted gross income. These weights are presented in Exhibit A-2.

Exhibit A-2			
DEFAULT INCOME WEIGHTS (based on a smoothing constant of 0.3)			
Year **(1 = most recent)**	**3 Years of Data**	**2 Years of Data**	**1 Year of Data**
1	.46	.59	1
2	.32	.41	
3	.22		

In Phase 1, the model does not allow the user to adjust the smoothing constant; however, in Phase 2 the model may prompt the user to make such adjustments. These options will be described in more detail in Section 2 of this appendix.

After finding the applicant's average adjusted gross income, the model compares it to the low income level for the applicant's county of residence and household size, as reported annually in the Adjusted Income Limits published by the U.S. Department of Housing and Urban Development. These income limits are updated annually by EPA. If the applicant's average adjusted gross income exceeds the low income threshold, or if the applicant has complex personal finances, the model recommends proceeding to a Phase 2 analysis.

2.   Phase 2 -- Summary of Applicant's Income Sources

In Phase 2, the model calculates the applicant's total weighted average income. To do so, the model examines seven potential income sources for each year in the analysis. These sources include:

1.   Wages and salaries;
2.   Interest and dividends;
3.   Capital gains/losses;
4.   Retirement-related;
5.   Business;

6. Farm; and

7. Other.

Total income for each year (TI$_i$) is calculated by summing the seven income categories. The resultant sums are then averaged via the smoothing constant to determine total weighted average income (TAI).

A.2

$$TAI = \sum_{i=1}^{n} (TI_i * weight_i)$$

where weight$_i$ is determined by smoothing constant equation A.1

Next, replacing TI in equation A.2 with x$_{i,j}$ (income in year i from source j), the model calculates weighted averages for each of the seven income categories. The model also calculates the percentage of total income that each category comprises. To do so, the model determines, for year i, the percent of total income accounted for by each source (percent x$_{i,j}$). Specifically:

A.3

$$Percent\ x_{i,j} = \frac{x_{i,j}}{TI_i}$$

Finally, it calculates a weighted average of the percentages of income for each source over all years provided, by simply using percentage income rather than total income in equation A.2. Since the model has a default smoothing constant of 0.3, the weights assigned to each year's total income, income source, or percentage are the same as those given for calculating average adjusted gross income in Phase 1. The applicable weights are shown in Exhibit A-2.

Income Variation Test

In Phase 2 the model determines whether total income in any year is significantly different from total average income (unweighted). If there is a significant difference, the model issues a flag prompting the user to check his or her data inputs. If the inputs are accurate, the user may decide to alter the smoothing constant.

For a case with three years of data, the model uses a two-part test to determine whether any year's total income is significantly different from average income (unweighted). First the model determines whether any year's total income falls outside the 80 percent confidence interval around the mean, as follows:

A.4

$$\bar{x} - t_{\alpha/2} * s_{\bar{x}} < \textbf{\textit{where}} \atop \mu < \bar{x} + t_{\alpha/2} * s_{\bar{x}}$$

$$\bar{x} = \frac{\sum\limits_{i=1}^{n} TI_i}{n}$$

$$t_{\alpha/2} = 1.886 \quad (t \; distribution, \; degrees \; of \; freedom \; = \; 2, \; 80\% \; confidence)$$

$$s_{\bar{x}} = \sqrt{\frac{\sum\limits_{i=1}^{n} (TI_i - \bar{x})^2}{(n - 1) * n}}$$

If any of the income figures lie outside the interval, the model proceeds to the second part of the test. It determines whether income for each year is more than 20 percent different from the unweighted average, using the following equation:

A.5

$$|\bar{x} - TI_i| \geq \bar{x} * .2$$

If income for any year lies outside the 80 percent confidence interval and is also more than 20 percent different from average income, the model issues a flag. The flag alerts the user that total income in one or more years is significantly different from total mean income. When this flag appears, the user may want to modify the smoothing constant. Information on changing the smoothing constant and the impacts of such a change are discussed in Chapter 4 of this manual and in the model's on-line help system. As noted in Chapter 4, increasing the smoothing constant weights the most recent year's income more heavily; decreasing the constant lowers the weight given to the most recent year's

income, simultaneously raising the weights given to other years. For a case with three years of data, the weights applied by the model for various smoothing constants are shown in Exhibit A-3.

Exhibit A-3				
INCOME WEIGHTS FOR THREE YEARS OF DATA				
Year (1 = most recent)	Smooth = 0.7	Smooth = 0.5	Smooth = 0.3	Smooth = 0.1
1	.72	.57	.46	.37
2	.22	.29	.32	.33
3	.06	.14	.22	.30

Note that the confidence interval methodology is applied only in cases that contain three years of income data. When only two years of data are available, the model uses only the second part of the test, and determines whether income in either year is more than 20 percent different from unweighted average income, as shown in Equation A.5. If so, the model issues a flag.

3.   Phase 2 -- Applicant's Rated Financial Status

The model's analysis of the applicant's current financial status is divided into four parts. These include the applicant's:

- Income Ranking;
- Available Cash Flow;
- Net Worth; and
- Debt Capacity.

a. Income Ranking

The model ranks the applicant's income relative to the median income for the applicant's county of residence and household size. In this calculation, the model divides the applicant's total average income, calculated previously in Equation A.2, by the median household income for the county of residence and household size of the applicant. The model then multiplies the result by 100 to obtain the rank in percentage form.

A.6

$$Income\ Rank\ (percentage) = \left(\frac{TAI}{MHI} \right) * 100$$

b. Available Cash Flow

To obtain the applicant's available cash flow (ACF), the model uses the applicant's total average income and total claimed living expenses (CLIVEXP). The model sums the applicant's living expenses, input by the user from the financial data request form and then multiplies these claimed living expenses by the cash flow contingency. The determination of the appropriate contingency is made by the income ranking (previously calculated); for each of three categories of income ranks, the model applies a different contingency to living expenses, as shown in Exhibit A-4. The specific contingency values used by the model are based upon professional judgment.

	Low	Medium	High
Exhibit A-4			
CASH FLOW CONTINGENCY SCHEDULE			
Income Rank	Less than 75% of MHI	75% to 125% of MHI	Greater than 125% of MHI
Contingency Allowance	15%	10%	5%

The model multiplies the applicant's claimed expenses by the appropriate percentage to obtain the cash flow contingency allowance (ALLOW). It then adds the allowance to expenses to obtain the applicant's total living expenses. Finally, it subtracts these total living expenses from total average income to arrive at available cash flow. The calculation is as follows:

A.7

$$ACF = TAI - (CLIVEXP + ALLOW)$$
$$where\ ALLOW = CONT * CLIVEXP$$

c.   Net Worth

To obtain the applicant's net worth, the model uses the applicant's total assets (TA) and total liabilities (TL). First, the model sums the applicant's assets and liabilities, input by the user from the financial data request form. Then, the model subtracts total liabilities from total assets to obtain net worth (NW). The calculation is as follows:

A.8

$$NW = TA - TL$$

d.   Assessment of Debt Capacity

To obtain the applicant's annual debt payments as a percentage of income (DPPI), the model uses the applicant's total average income (as calculated in equation A.2) and the applicant's total annual debt payments (TADP). First, the model sums the applicant's annual debt payments, as input by the user from the financial data request form. Then, it divides annual debt payments by total average income, multiplies by 100, and arrives at the applicant's debt payments as a percentage of income.

4. Scenario 1: Ability to Pay from Cash Flow

Scenario 1 examines the applicant's ability to fund a penalty or contribution from cash flow. The model defines cash flow as total average income (TAI) less total living expenses (TLIVEXP). It assumes that the applicant's excess cash flow for the next five years is available for a penalty or contribution. The model further assumes that the applicant will obtain a loan and make a lump-sum payment to the government. Consequently, the maximum contribution an applicant can make from cash flow is equal to the present value of five years of cash flow less interest payments and a "safety net" contingency allowance. If the applicant's total average income is too low (or living expenses are too high) to fund the entire penalty or contribution sought by EPA in this manner, the model concludes that the applicant cannot afford the entire amount, and instead calculates the maximum contribution the applicant can afford through five years of cash flow.

To determine whether the applicant can afford the penalty or contribution sought by EPA, the model first calculates the present value of five years of the applicant's available cash flow (PVCF), as follows:

Then the model calculates the funds necessary to pay the penalty or contribution (FUNDS).

A.11

$$FUNDS = (contribution) * (1 + CONT)$$

The model compares this value to the present value of five years' cash flow -- if the present value of cash flows is greater than or equal to the amount necessary to fund the penalty or contribution, the model concludes that the applicant can afford to fund the entire amount. If, however, the amount necessary to fund the contribution is greater than available cash flows, the model determines that the applicant cannot afford the entire amount and finds the portion which the applicant can pay. Both of these outcomes are described below.

If the applicant's cash flow is negative (i.e. total living expenses exceed total average income) the model will not perform an ability to pay calculation for the applicant in Scenario 1. The model assumes that the applicant cannot fund any amount from cash flow. In this case, the before/after evaluations will be identical on the output screens, and a flag will alert the user that the applicant cannot finance a penalty or contribution through cash flow.

a.   Model Conclusion When the Applicant Can Afford Contribution

In the case in which the applicant can afford the penalty or contribution, the model uses the cash flow which will be necessary to fund the entire contribution (including contingency), as calculated above, to find the annual payment required to finance that amount (CFFC):

A.12

$$CFFC = \frac{(FUNDS * r)}{\left[1 - \dfrac{1}{(1 + r)^n} \right]} \quad where\ n = 5$$

A-13

Then the model finds the contingency allowance by simply subtracting the penalty or contribution sought by EPA from the funds necessary to pay it. This contingency, along with the contribution, constitutes the applicant's new expense.

A.13

$$CSALLOW = FUNDS - contribution$$

---

b.   Model Conclusion When the Applicant Cannot Afford Contribution

If the penalty or contribution input by the user is greater than the applicant can afford with five years of cash flow, or the user has entered a value of zero for the contribution, the model calculates the maximum amount the applicant can pay through cash flow (PMT), as follows:

A.14

$$PMT = \frac{PVCF}{(1 + CONT)}$$

Finally, the model calculates the portion of the applicant's cash flows that are constituted by the "safety net" contingency allowance by subtracting the penalty or contribution paid to EPA from the present value of five years of cash flows.

c.   Before/After Evaluations

The model calculates the financial impact on the applicant of funding the penalty or contribution from cash flow. To do so, the model presents "before" and "after" summaries that show the impact of funding the contribution on the applicant's living expenses, available cash flow, liabilities, net worth, and annual debt payments. These calculations are summarized in Exhibit A-5.

First, the model calculates the applicant's new level of living expenses (TLIVEXP) after the contribution is made; this amounts to the annual cash flow set aside to fund the contribution (ACF or CFFC, depending on whether the applicant can or cannot afford the entire contribution) added to the old level of living expenses.

Then the model calculates the new level of available cash flow by subtracting the new level of total living expenses from the unchanged level of total average income. In the case in which the applicant cannot afford the penalty or contribution (or the contribution entered by the user is zero) the new level of available cash flow will always be zero, since the model removes from the user all available cash to fund the maximum contribution possible.

Next, the model calculates the new level of total liabilities after the penalty or contribution has been funded. To do so, it adds the amount of the contribution the applicant can afford (PMT) to the old level of total liabilities. (When the applicant can afford the entire contribution, PMT = the contribution sought by EPA.) The model then subtracts this new level of total liabilities from the unchanged level of total assets to arrive at the new level of net worth.

A.15

$$NW_a = TA - TL_a$$
$$where \ \ TL_a = TL_b + PMT$$

Note that if the contribution funded by the applicant through cash flow causes his or her net worth to become negative in the "after" case, the model will issue a flag in Phase 2 Output alerting the user to this situation.

Finally, the model calculates the new amount of debt payments as a percentage of income. To do so, the model first finds the level of additional debt payment required to support the contribution. This amount is the portion of the applicant's annual cash flow required to fund the contribution alone, without the contingency, and is calculated as follows:

A.16

$$ADP = \frac{PMT * r}{\left[1 - \frac{1}{(1 + r)^n}\right]} \quad where\ n = 5$$

The model adds the old level of total annual debt payments to this additional debt payment to get the new level of total annual debt payments. It then divides this amount by the unchanged level of total average income, and multiplies the result by 100, to arrive at the new level of debt payments as a percentage of income. The calculation is as follows:

A.17

$$DPPI_a = \frac{TADP_b + ADP}{TAI} * 100$$

Note that if the contribution funded by the applicant through cash flow causes debt payments as a percentage of income to exceed 36 percent in the "after" case, the model will issue a flag in Phase 2 Output alerting the user to this situation.

Exhibit A-5 displays the algorithms used in Scenario 1, formatted as in the model's printouts.

<div style="border:1px solid">

Exhibit A-5

EQUATION REFERENCES

SCENARIO 1: CASH FLOW

	__Can Afford__	__Can't Afford__
1. Contribution Sought by EPA	User defined	User defined
2. Cash Flow to Fund Contribution	EQ A.12	ACF
3. Loan Rate for 5 Year Unsecured Loan	Default	Default
4. Present Value of 5 Years' Cash Flow	EQ A.11	EQ A.10
5. Contingency Allowance	EQ A.13	line 4 - line 6
6. Contribution Individual Can Pay to EPA	Contrib. sought by EPA	EQ A.14

	Before Contribution	**After Contribution**
7. Total Average Income	EQ A.2	EQ A.2
8. Total Living Expenses	CLIVEXP + ALLOW	line 8_{before} + ACF or CFFC
9. Available Cash Flow	EQ A.7 (line 7 - line 8)	line 7 - line 8
10. Total Assets	FDR[1]	FDR
11. Total Liabilities	FDR	EQ A.15
12. Net Worth	EQ A.8 (line 10 - line 11)	EQ A.15
13. Total Average Income	EQ A.2	EQ A.2
14. Total Annual Debt Payments	FDR	EQ A.16 + line 14_{before}
15. Debt Payment as a Percentage of Income	EQ A.9 (line 14/line 13) * 100	EQ A.17

[1]   FDR = Obtained directly from the financial data request form.

</div>

5.   **Scenario 2 -- Ability to Pay from Loan from Commercial Lenders**

In Scenario 2, the model determines the applicant's ability to pay from loans from commercial lenders. To do so, the model uses the applicant's current debt payments as a percentage of income to see whether the applicant can pay the entire penalty or contribution by taking on additional debt payments. The model uses 36 percent as an approximation of the upper bound which debt payments as a percentage of income may reach. Thus, it determines how much additional debt the applicant can assume by multiplying the applicant's total average income by 36 percent and subtracting the amount of current total annual debt payments from that, as follows:

A.18

$$ADP = (TAI * .36) - TADP_b$$

Then the model calculates the present value of that amount for five years to obtain the maximum amount the applicant can fund toward the penalty or contribution. This represents the maximum commercial loan the applicant can secure in support of the proposed contribution.

A.19

$$LOAN = \left(\frac{ADP}{r} \right) * \left[1 - \frac{1}{(1 + r)^n} \right] \ where \ n = 5$$

The model compares this value to the proposed contribution -- if the amount able to be funded by the applicant is greater than or equal to the contribution, the model determines that the applicant is able to pay. If not, the applicant is deemed unable to fund the entire penalty or contribution from loans from commercial lenders alone.

If the applicant's debt payments already exceed 36 percent of his income, the model will not perform an ability to pay calculation for the applicant in Scenario 2. The model assumes that the applicant cannot fund any amount from commercial loans. In this case, the before/after evaluations of finances will be identical on the output screens, and a flag will alert the user that the applicant cannot finance a penalty or contribution through this method.

a. Model Conclusion When the Applicant Can Afford Contribution

In the case in which the amount of a five-year loan which the applicant can finance is greater than the contribution required, the model concludes that the applicant can afford the entire penalty or contribution. The model proceeds by first equating the contribution sought by EPA (input by the user in the "Case Description Details" screen) with the five-year supportable loan with additional debt payments (LOAN). Then the model calculates the additional debt payments (ADP) which must be used to take a five year loan in that amount with the following equation:

$$\textbf{A.20}$$

$$ADP = \frac{LOAN * r}{\left[1 - \dfrac{1}{(1 + r)^n}\right]} \quad where \ n = 5$$

The model adds the previous level of total annual debt payments to these additional debt payments to arrive at the new (post-contribution) figure for total annual debt payments.

b. Model Conclusion When the Applicant Cannot Afford Contribution

In the case in which the amount of a five-year loan which the applicant can finance is less than the penalty or contribution sought by EPA, or the user has input zero for the amount of contribution, the model judges that the applicant cannot afford the contribution. Thus, it computes the maximum amount that the applicant can fund. To do so, the model proceeds in the same way as it did in determining whether the applicant could afford the contribution; it calculates the level

of total annual debt payments that equal 36 percent of total average income (see equation A.18 above). From this total, it subtracts the current level of total annual debt payments to arrive at the maximum level of additional debt payments the applicant can afford.

This maximum level of additional debt payments tells the user how much, annually, the applicant can afford to pay on a loan. The model then calculates the five-year loan that can be funded from payments of this amount by taking the present value of five years of this payment, discounted at the interest rate (r) (see equation A.19 above).

This present value equals the amount of the penalty or contribution that can be funded through a five-year loan, and is the maximum the applicant can afford.

c. Before/After Evaluation

The model calculates the financial impact on the applicant of funding the contribution from loans. To do so, the model presents "before" and "after" summaries that show the impact of funding the contribution on the applicant's living expenses, available cash flow, liabilities, net worth, and annual debt payments. These calculations are summarized in Exhibit A-6. In Scenario 2, the before/after evaluation of the effects of the loan on the applicant's income and debt status are the same whether the applicant can or cannot fund the entire contribution.

First, the model finds the new level of total living expenses by adding the additional debt payments, multiplied by (1 + cash flow contingency), to the old level of total living expenses, as follows:

A.21

$$TLIVEXP_a = TLIVEXP_b + ADP\,(1 + CONT)$$

Then the model subtracts the new level of total living expenses from the unchanged level of total average income to obtain available cash flow after the contribution.

Note that if the contribution funded by the applicant through loans from commercial lenders causes available cash flow to become negative in the "after" case, the model will issue a flag in Phase 2 Output alerting the user to this situation.

Next, the model obtains the new level of total liabilities by adding the five-year supportable loan with additional debt payments (i.e. the amount of the penalty or contribution that can be funded by the applicant) to the old level of total liabilities. The model then subtracts this new level of total liabilities from the unchanged level of total assets to obtain the new level of net worth.

A.22
$$NW_a = TA - TL_a$$
$$where \; TL_a = TL_b + LOAN$$

Note that if the contribution funded by the applicant through loans from commercial lenders causes net worth to become negative in the "after" case, the model will issue a flag in Phase 2 Output alerting the user to this situation.

Finally, the model obtains the debt payments as a percentage of income by adding the additional debt payments to the old level of total annual debt payments, dividing this sum by the unchanged level of total average income, and multiplying by 100, as follows:

A.23
$$DPPI_a = \frac{TADP_b + ADP}{TAI} * 100$$

Exhibit A-6 displays the algorithms used in Scenario 2, formatted as in the model's printouts.

<table>
<tr><td colspan="3" align="center">Exhibit A-6</td></tr>
<tr><td colspan="3" align="center">EQUATION REFERENCES</td></tr>
<tr><td colspan="3" align="center">SCENARIO 2: COMMERCIAL LOANS</td></tr>
</table>

	Can Afford	**Can't Afford**
1. Contribution Sought by EPA	User defined	User defined
2. Current Debt Payments	FDR[1]	FDR
3. Additional Debt Payment	EQ A.20	EQ A.18
4. Total Annual Debt Payments	line 2 + line 3	line 2 + line 3
5. 5 Year Supportable Loan with Additional Debt Payment	Contrib. sought by EPA	EQ A.19

	Before Contribution	**After Contribution**
6. Total Average Income	EQ A.2	EQ A.2
7. Total Living Expenses	CLIVEXP + ALLOW	EQ A.21
8. Available Cash Flow	EQ A.7 (line 6 - line 7)	line 6 - line 7
9. Total Assets	FDR	FDR
10. Total Liabilities	FDR	EQ A.22
11. Net Worth	EQ A.8 (line 9 - line 10)	EQ A.22
12. Total Average Income	EQ A.2	EQ A.2
13. Total Annual Debt Payments	FDR	$ADP + line\ 13_{before}$
14. Debt Payment as a Percentage of Income	EQ A.9 (line 13/line 12) * 100	EQ A.23

[1]   FDR = Obtained directly from the financial data request form.

APPENDIX B

<<<INFORMATION NOT AVAILABLE>>>

APPENDIX C

INDIVIDUAL ABILITY TO PAY CLAIM
Financial Data Request Form

This form requests information regarding your financial status. The data will be used to evaluate your ability to pay for environmental clean-up or penalties. If there is not enough space for your answers, please use additional sheets of paper. Note that we may request further documentation of any of your responses. We welcome any other information you wish to provide supporting your case, particularly if you feel your situation is not adequately described through the information requested here.

Certification

Under penalties of perjury, I declare that this statement of assets, liabilities, and other information is true, correct, and complete to the best of my knowledge and belief. I further understand that I will be subject to prosecution by the Environmental Protection Agency to the fullest extent possible under the law should I provide any information that is not true, correct, and complete to the best of my knowledge.

SignatureDate

_____

Name:
Spouse's Name:
Address:
County of Residence:

PART I. BACKGROUND INFORMATION

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1.	MEMBERS OF HOUSEHOLD (List the head of the household and all persons living with you)			
Name		**Age**	**Relationship to Head of Household**	**Currently Employed?**

2.	EMPLOYMENT (List all jobs held by persons in household)			
Name	**Employer**		**Length of Employment**	**Annual Salary**

3. INCOME (List all income earned by persons in household. If members of the household other than the applicant and spouse earn income, please itemize on separate page.)

Source	Gross (Pre-Tax)		Period of Payment (check one)			
	Applicant	**Spouse**	**Weekly**	**Monthly**	**Quarterly**	**Yearly**
Wages/Salaries						
Sales Commissions						
Investment Income (interest, dividends, capital gains, etc.)						
Net Business Income						
Rental Income						
Retirement Income (Pension, Social Security, etc.)						
Child Support						
Alimony						
Other Income (please itemize)						

PART II. CURRENT LIVING EXPENSES

Please list personal living expenses which were typical during the last year and indicate if any of these values are likely to change significantly in the current year. Please do not include business expenses. If you are the owner of an operating business, please attachment any available financial statements.

Expense	Amount	Period of Payment (check one)				For Agency Use Only
		Weekly	Monthly	Quarterly	Yearly	
A. Living Expenses						
1. Rent						
2. Home maintenance						
3. Auto fuel maint./other transp.						
4. Utilities						
a. Fuel (gas,oil,wood,propane)						
b. Electric						
c. Water/sewer						
d. Telephone						
5. Food						
6. Clothing, personal care						
7. Medical costs						
B. Debt Payments						
1. Mortgage payments						
2. Car payments						
3. Credit card payments						
4. Educational loan payments						
C. Insurance						
1. Household insurance						
2. Life insurance						
3. Automobile insurance						
4. Medical insurance						
D. Taxes						
1. Property taxes						
2. Federal income taxes						
3. State income taxes						
4. FICA						
E. Other Expenses						
1. Childcare						
2. Current School tuition/expenses						
3. Legal or professional services						
4. Other (itemize on separate page)						
Total Current Expenses						

PART III. NET WORTH

Please provide the following information to the best of your ability. Data should be as current as possible. Estimates are acceptable; if you wish note such items with an "E". If you are the sole proprietor of a business, please list business assets and liabilities, in addition to personal assets and liabilities. Please mark these entries with a "B" to identify them as business assets and liabilities.

1. BANK ACCOUNTS (Checking, NOW, Savings, Money Market, CDS etc.)

Name of Bank or Credit Union	Type of Account	Current Balance
For Agency Use Only - Total Current Balance in Bank Accounts		

2. INVESTMENTS (Stock, Bonds, Mutual Funds, Options, Futures, Real Estate Investment Trusts   (REIT), etc.)

Investment	Number of Shares or Units	Current Market Value
For Agency Use Only - Total Current Market Value of Investments		

3. RETIREMENT FUNDS AND ACCOUNTS (IRA, 401(k), Keogh, vested interest in company   retirement fund, etc.)

Description of Account	Estimated Market Value
For Agency Use Only - Total Estimated Market Value of Retirement Funds and Accounts	

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4.	LIFE INSURANCE POLICIES (Whole Life, Universal Life, etc.)		
Policy Holder	Issuing Company	Policy Value	Cash Value
For Agency Use Only - Total Value of Life Insurance Policies			

5a.	VEHICLES USED FOR COMMUTING PURPOSES (Cars, Trucks, Motorcycles, etc. Only list up to two vehicles used for commuting purposes.)	
Model	Year	Estimated Market Value
For Agency Use Only - Total Estimated Market Value of Vehicles		

5b.	OTHER VEHICLES (Cars, Trucks, Motorcycles, Recreational Vehicles, Motor Homes, Boats, Airplanes etc.)	
Model	Year	Estimated Market Value
For Agency Use Only - Total Estimated Market Value of Vehicles		

6.	PERSONAL PROPERTY (Household Goods and Furniture, Jewelry, Art, Antiques, Collections, Precious Metals, etc. Only list items with a value greater than $500.00)
Type of Property	Estimated Market Value
For Agency Use Only - Total Estimated Market Value of Personal Property	

7a.	REAL ESTATE — PRIMARY RESIDENCE (Home — List only one such residence.)		
Location	**Description of Property**	**Estimated Market Value**
For Agency Use Only - Total Estimated Market Value of Real Estate		

7b.	OTHER REAL ESTATE (Land, Buildings, Land with Buildings)		
Location	**Description of Property**	**Estimated Market Value**
For Agency Use Only - Total Estimated Market Value of Real Estate		

8.	OTHER ASSETS	
Type of Asset	**Estimated Market Value**
For Agency Use Only - Total Other Assets	

9.	CREDIT CARDS AND LINES OF CREDIT		
Credit Card/Line of Credit (Type)	**Owed To**	**Balance Due**
For Agency Use Only - Total Balance Due on Credit Cards and Lines of Credit		

10. VEHICLE LOANS (Cars, Trucks, Motorcycles, Recreation Vehicles, Motor Homes, Boats, Airplanes, etc.)

Vehicle (Model and Year)	Owed To	Balance Due	Start Date	End Date
For Agency Use Only - Total Balance Due on Vehicle Loans				

11. FURNITURE AND HOUSEHOLD GOODS LOANS:

List Item	Owed To	Balance Due	Start Date	End Date
For Agency Use Only - Total Balance Due on Furniture and Household Goods Loans				

12. MORTGAGES AND REAL ESTATE LOANS

Type of Loan	Owed To	Property Secured Against	Balance Due	Start Date	End Date
For Agency Use Only - Total Balance Due on Mortgages and Real Estate Loans					

13.   OTHER DEBT (Amounts due to individuals, Fixed obligations, Taxes Owed, Overdue Alimony or Child Support, etc.)

Type of Debt	Owed To	Balance Due	Start Date	End Date
For Agency Use Only - Total Balance Due on Other Debt				

PART IV. ADDITIONAL INFORMATION

Please respond to the following questions. For any question that you answer "Yes," please provide additional information on separate pages or at the bottom of this page.

QUESTION	YES	NO
1. Do you have any reason to believe that your financial situation will change during the next year?		
2. Are you currently selling or purchasing any real estate?		
3. Is anyone (or any entity) holding real or personal property on your behalf (e.g. a trust)?		
4. Are you a party in any pending lawsuit?		
5. Have any of your belongings been repossessed in the last three years?		
6. Are you a Trustee, Executor, or Administrator?		
7. Are you a participant or beneficiary of an estate or profit sharing plan?		
8. Have you declared bankruptcy in the last seven years?		
9. Do you receive any type of federal aid or public assistance?		

APPENDIX D

FOR THE NEW WINDOWS™ USER	
If you want to do this...	**Do this...**
Start Windows™ from DOS	Type **win** at the DOS prompt (e.g., C:>)
Move the cursor	Either use the arrow keys on the keyboard or move the mouse until the cursor is properly placed and click the left button of the mouse once.
Click the mouse	Press down once on the left button of the mouse. To double-click the mouse, press down twice in succession on the left button.
Drag the mouse	Press and hold down the left mouse button while moving the mouse over an area on the screen.
Scroll to view text	When all the text in a document or application will not fit on the screen, a scroll bar will appear underneath or to the right of the screen, with arrows at either end of it. Move the cursor to the arrow specifying the direction in which you wish to view more text, then click the mouse repeatedly or hold the left button down.
Highlight text	Position the cursor at the beginning of the text you wish to highlight. Then drag the mouse to the end of the selected text. This is helpful if you wish to delete, cut, or copy a block of text.
Start a Windows™ application, like the Individual Ability to Pay Model	When Windows™ opens, the Program Manager application will be open, and within it will be icons for the various other applications available. Move the cursor onto the icon of your choice and double-click the mouse.
Carry out a command from the application's menu	Click the menu item you need from the menu bar at the top of the screen. The list of commands within this menu item will pop up under it; drag the mouse to the one you need and then release the mouse, or move the cursor to the one you need and click it once.
Create a directory	In Program Manager, double-click the File Manager icon. Highlight the root directory or subdirectory in which you want to create a subdirectory by clicking it. Then choose File from the menu bar and choose Create Directory. Type in the name of the new directory and click OK or hit enter on the keyboard.
Delete text	Either press Backspace or Delete repeatedly on the keyboard, or highlight the text you wish to delete and press delete on the keyboard.
Insert text	Move the cursor to the insertion point within the existing text and click the mouse. Then type in the new text.
Switch between open applications	Press and hold down the Alt key and repeatedly press the Tab key until the icon for the application you need appears. Release the Alt key.

FOR THE NEW WINDOWS™ USER (**continued**)	
Open a file	In the application in which the file was saved, select File from the menu bar and select Open. If the file was saved in a different drive than the default drive, click the down-pointing arrow next to the drive box and drag the mouse to the appropriate drive. Then choose the directory by double-clicking it in the directory box. Finally, either double-click or type in the name of the file and press enter.
Use Help	Press F1 or choose Help from the menu bar and click a topic.
Quit an application	Double-click the Control-menu Box (located in the far upper left corner of the screen).
Quit Windows™	Double-click the Control-menu Box in Program Manager.